

# ORCHARD HEIGHTS

## R-10 SUBDIVISION & WETLANDS APPLICATION

### FOR WORK WITHIN UPLANDS REVIEW AREA

380 TUNXIS ROAD—WEST HARTFORD, CONNECTICUT

**PROPERTY OF:** ORCHARD HEIGHTS DEVELOPERS, LLC  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT 06107

**DEVELOPER:** ORCHARD HEIGHTS DEVELOPERS, LLC  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT 06107  
(860) 716-9922  
CONTACT: JEFF WEBSTER

**LAND SURVEYING-LAND PLANNING:** THE BONGIOVANNI GROUP, INC.  
170 PANE ROAD  
NEWINGTON, CONNECTICUT 06111  
(860) 666-0134



**CIVIL ENGINEERING:** WESTON & SAMPSON  
273 DIVIDEND ROAD  
ROCKY HILL, CONNECTICUT 06067  
(860) 513-1473



273 Dividend Road, Rocky Hill, CT 06067  
860.513.1473 800.SAMPSON  
www.westonandsampson.com

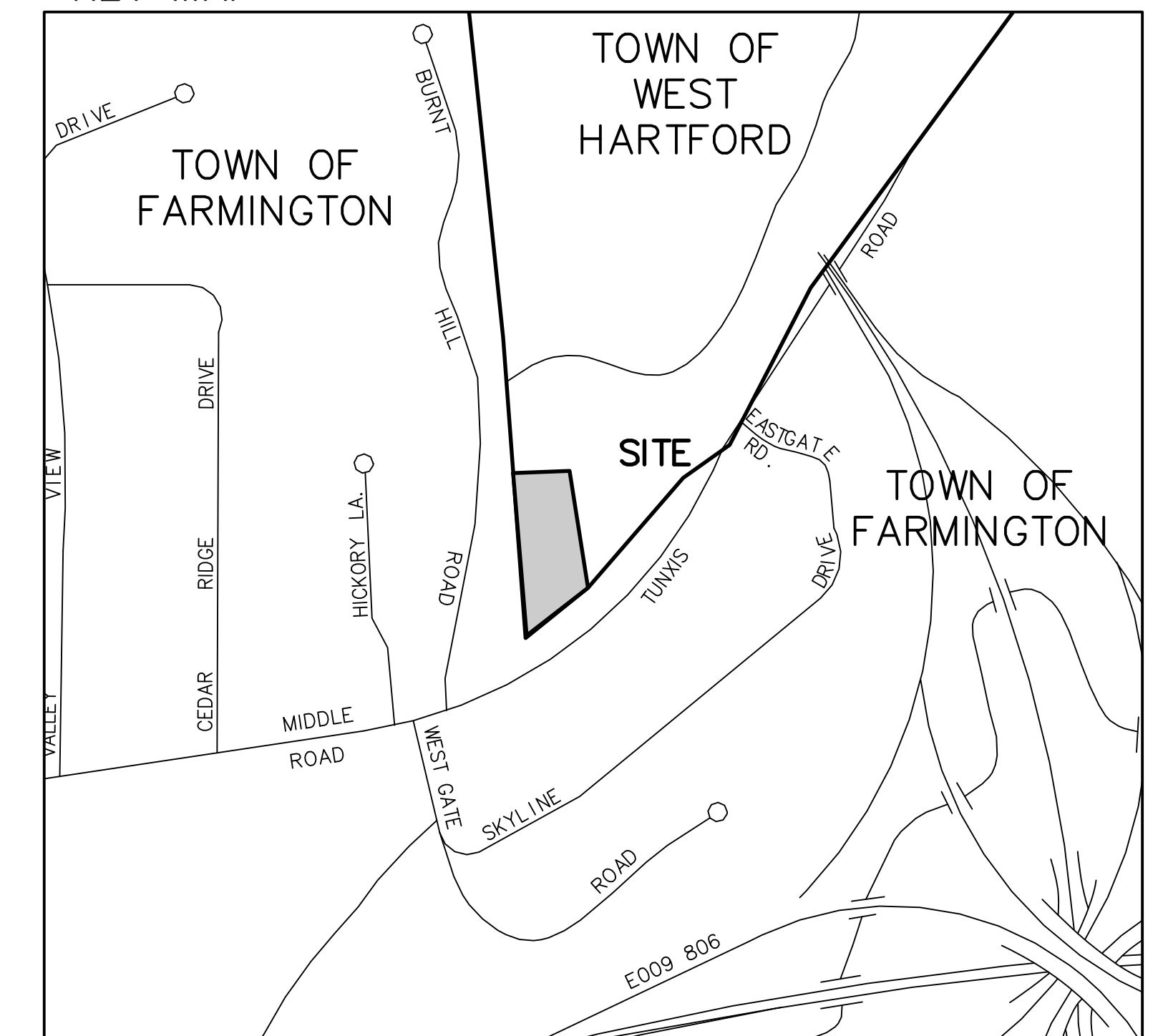
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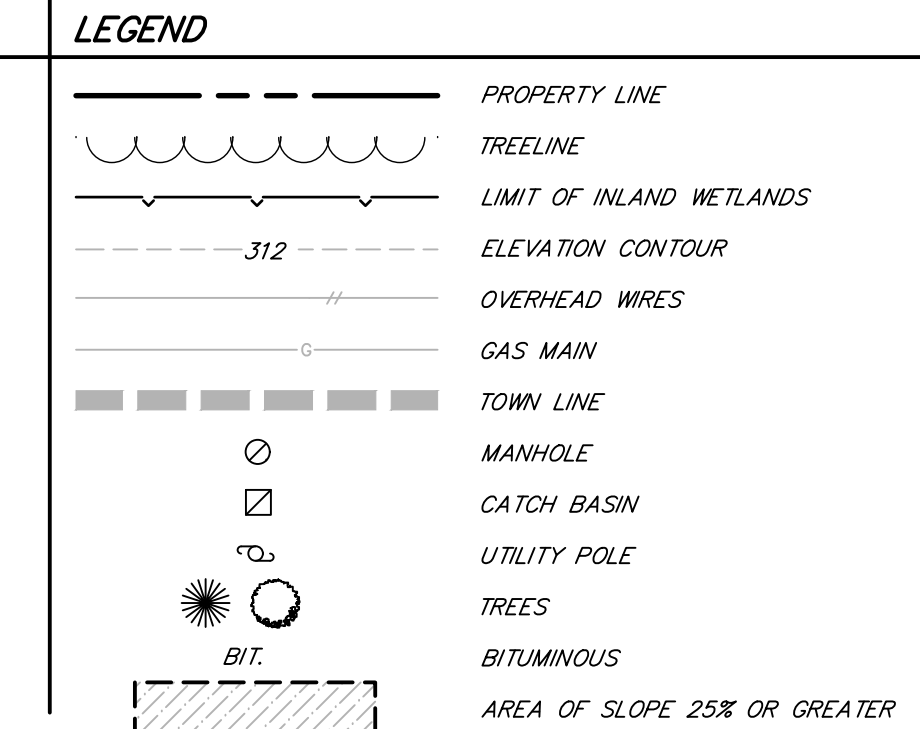
#### GENERAL NOTES:

1. HOUSE LOCATIONS AND ELEVATIONS ARE FOR THE PURPOSE OF DEMONSTRATING THAT ALL LOTS WILL SUPPORT DEVELOPMENT FOR THEIR INTENDED PURPOSE. THE PROPOSED HOUSES AS SHOWN ARE NOT INTENDED IN ANY WAY TO LIMIT THE SIZE, STYLE, LOCATION OR ELEVATION OF THE ACTUAL HOUSES TO BE BUILT.
2. ALL DISTURBED AREAS TO BE TOPSOILED AND SEED.
3. LOT GRADING SHALL BE DONE TO PROVIDE SURFACE DRAINAGE AND PREVENT PONDING.
4. SANITARY SEWERAGE TO BE PROVIDED BY THE METROPOLITAN DISTRICT.
5. WATER SERVICE TO BE PROVIDED BY ONSITE WELLS.
6. VERTICAL DATUM = NAVD 88 (NORTH AMERICAN VERTICAL DATUM OF 1988).
7. HORIZONTAL DATUM = NAD 83 (NORTH AMERICAN DATUM OF 1983).
8. ALL UTILITIES SHALL BE UNDERGROUND.
9. CONSTRUCTION OF ANY IMPROVEMENTS SHOWN SHALL BE IN ACCORDANCE WITH CTDOT, FORM 817, AS AMENDED, "STANDARD SPECIFICATIONS FOR ROAD, BRIDGES AND INCIDENTAL CONSTRUCTION", "TOWN OF WEST HARTFORD SPECIFICATIONS FOR CONSTRUCTION OF ROADS", "TOWN OF WEST HARTFORD ZONING REGULATIONS", "TOWN OF WEST HARTFORD SUBDIVISION REGULATIONS", "TOWN OF WEST HARTFORD INLAND WETLANDS AND WATERCOURSES REGULATIONS" AND THE CONNECTICUT LANDSCAPE ASSOCIATION'S "STANDARD SPECIFICATIONS FOR PLANTING TREES, SHRUBS, VINES, ETC." ARE TO BE USED FOR CONSTRUCTION STANDARDS.
10. ACCESS TO THE SITE DURING CONSTRUCTION SHALL BE THROUGH THE CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS AND NO OTHER ACCESS SHALL BE ALLOWED.
11. SHADE TREES SHALL EITHER BE PRESERVED OR PLANTED ON EACH LOT IN ACCORDANCE WITH WEST HARTFORD SUBDIVISION REGULATIONS SECTION A184-26.
12. THE TOWN OF WEST HARTFORD SHALL APPROVE SHOP DRAWINGS BEFORE ORDERING MATERIALS FOR GUIDE RAILS, RETAINING WALL, WATER QUALITY STRUCTURE, LIGHT POLES, LIGHT POLE FOUNDATIONS, AND LIGHT POLE FIXTURES. MATERIAL CERTIFICATE FOR GRANITE CURB SHALL BE PROVIDED TO THE TOWN OF WEST HARTFORD PRIOR TO ORDERING.

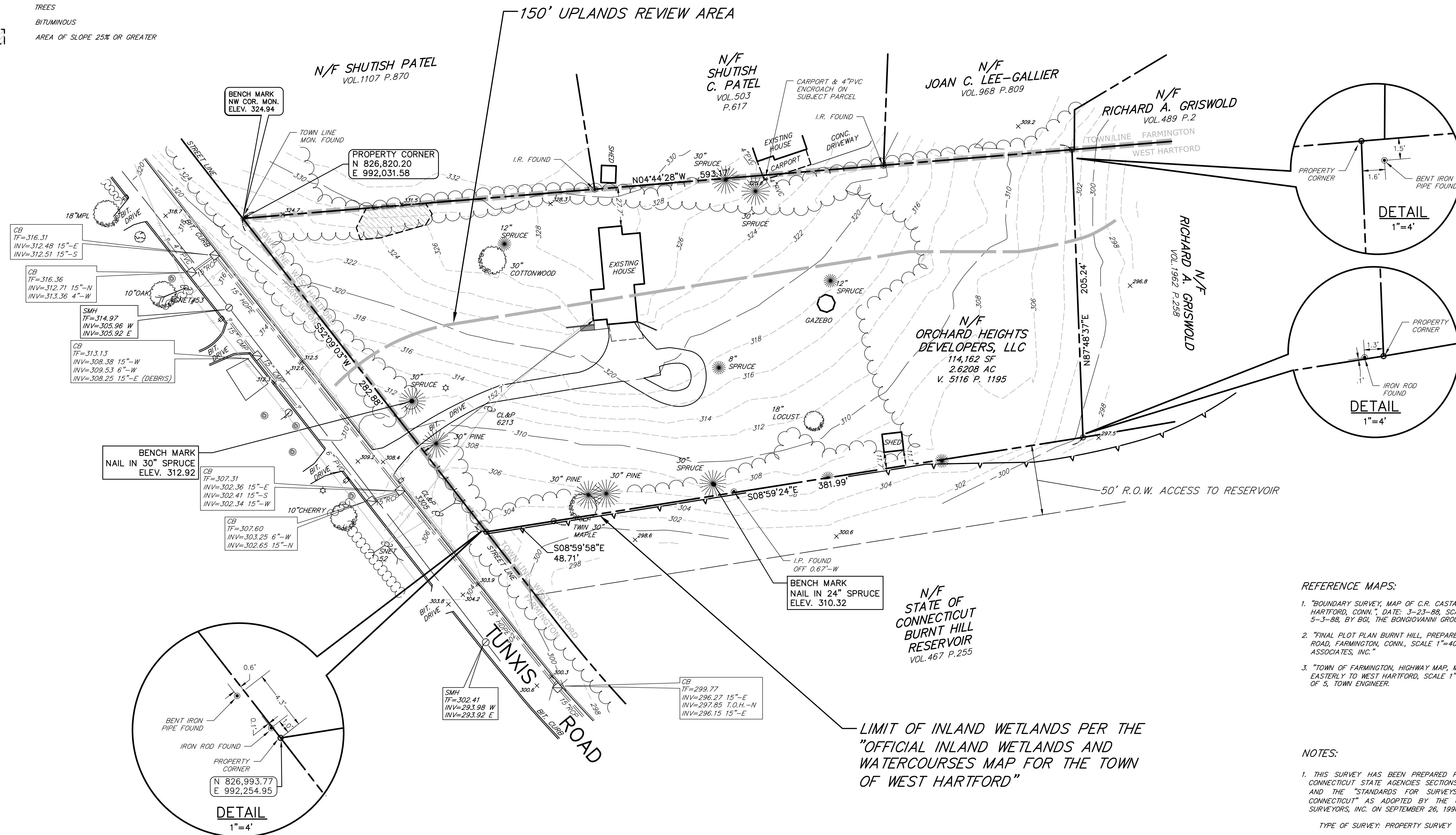
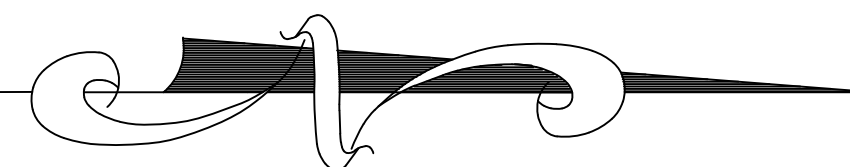
#### KEY MAP



Date: 1-18-19  
Revised: 6-27-19  
Revised: 5-31-19  
Revised: 4-26-19



NAD83



REFERENCE MAPS:

- "BOUNDARY SURVEY, MAP OF C.R. CASTALDI, 414 TUNXIS ROAD, WEST HARTFORD, CONN., DATE: 3-23-88, SCALE: 1"=40', REVISED THROUGH 5-3-88, BY BGI, THE BONGIOVANNI GROUP, INC."
- "FINAL PLOT PLAN BURNT HILL, PREPARED FOR NEWELL STAMM, BURNT HILL ROAD, FARMINGTON, CONN., SCALE 1"=40', DATE JUNE 30, 1983, ALFORD ASSOCIATES, INC."
- "TOWN OF FARMINGTON, HIGHWAY MAP, MIDDLE ROAD, FROM OLD SOUTH ROAD, EASTERLY TO WEST HARTFORD, SCALE 1"=40', DATE JAN. 1940, SHEETS 3 & 4 OF 5, TOWN ENGINEER."

NOTES:

- THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996;

TYPE OF SURVEY: PROPERTY SURVEY  
BOUNDARY DETERMINATION CATEGORY: RESURVEY  
CLASS OF HORIZONTAL ACCURACY: A-2  
CLASS OF VERTICAL ACCURACY: V-2  
CLASS OF BOUNDARY ACCURACY: A-2  
CLASS OF TOPOGRAPHIC ACCURACY: T-2  
SURFACE UTILITY ACCURACY: T-2  
UNDERGROUND UTILITY ACCURACY: D (COMPILED)  
INTENDED USE: EXISTING CONDITIONS

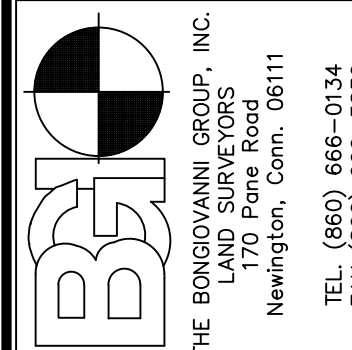
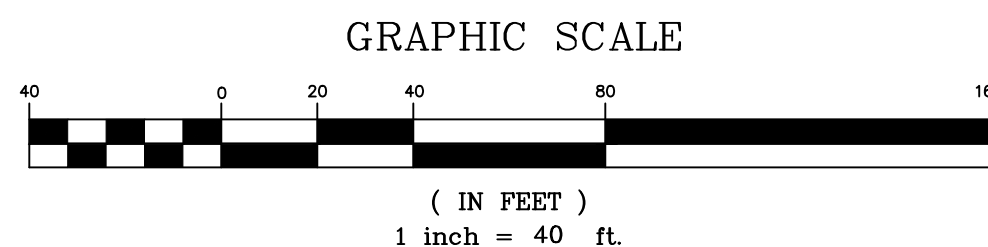
- HORIZONTAL DATUM IS BASED ON NAD'83.
- ELEVATIONS ARE BASED ON NAVD'88

- THIS MAP IS VALID ONLY IF IT BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE UNDERSIGNED LAND SURVEYOR.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

SURVEYOR'S SIGNATURE DATE LICENSE NUMBER

THIS DRAWING HAS BEEN PREPARED BASED, IN PART, ON INFORMATION PROVIDED BY OTHERS RELATING TO THE LOCATION OF UNDERGROUND SERVICES. WE CAN NOT VERIFY THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.  
INDICATED UNDERGROUND UTILITIES ARE BASED ON AVAILABLE DATA. THE LOCATIONS ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN.  
CALL "CALL B-4-U DIG" AT 1-800-922-4455 PRIOR TO ANY EXCAVATION.



Date	Revision	TOWN COMMENTS
Scale: 1"=40'	Checked: AB	
Date: 10-08-18	Drawn: DUD	
4-26-19		

RESURVEY PREPARED FOR  
ORCHARD HEIGHTS DEVELOPERS LLC  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

PROPERTY SURVEY

Sheet  
216  
of

87306

## LEGEND

	STONE WALL
	FENCE
	REBAR TO BE SET
	EXISTING MERESTONE
	MERESTONE TO BE SET
	PROPERTY LINE
	BUILDING LINE
	TOWN LINE

Line Table		
Line #	Direction	Length
L1	N8°59'24"W	33.18'

Curve Table			
Curve #	Delta	Radius	Length
C1	2°07'50"	2475.00'	92.03'
C2	59°47'03"	25.00'	26.09'
C3	53°57'49"	55.00'	51.80'
C4	57°00'44"	55.00'	54.73'
C5	74°10'24"	55.00'	71.20'
C6	42°40'46"	55.00'	40.97'
C7	43°44'34"	25.00'	19.09'
C8	2°19'02"	2525.00'	102.12'
C9	2°38'23"	1975.00'	90.99'
C10	119°10'43"	15.00'	31.20'
C11	61°08'27"	15.00'	16.01'
C12	2°57'33"	2025.00'	104.58'
C18	53°48'23"	55.00'	51.65'

Lot Area Table		
Lot #	Area (square feet)	Area (acres)
1	18,232	0.4185
2	11,998	0.2754
3	11,529	0.2647
4	11,102	0.2549
5	10,987	0.2522
6	17,718	0.4068
OPEN SPACE 1	5,638	0.1294
OPEN SPACE 2	5,162	0.1185

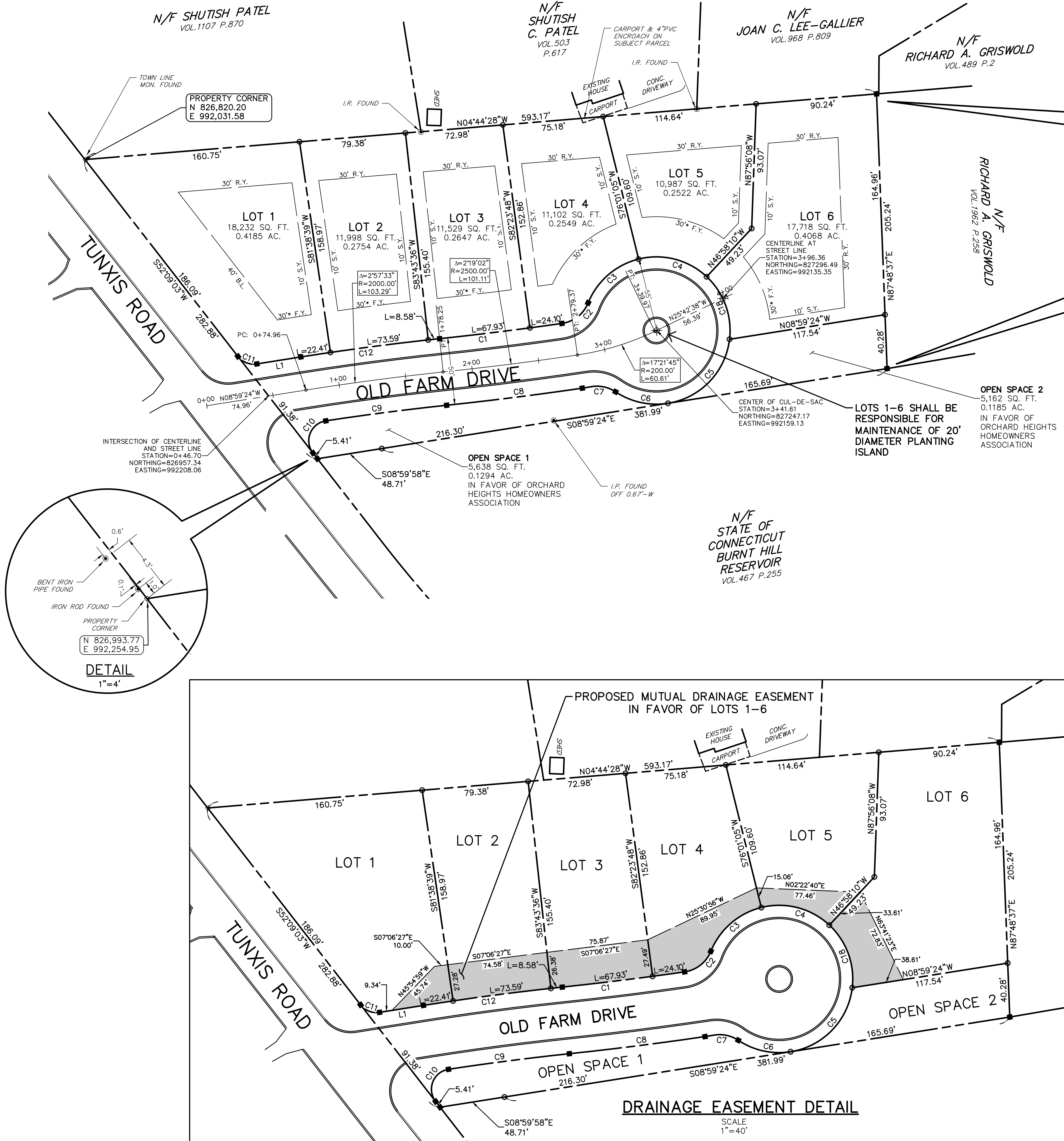
## LOT WIDTH AND DEPTH TABLE

LOT #	AVERAGE LOT WIDTH	AVERAGE LOT DEPTH
1	110.23'	161.13'
2	76.47'	157.18'
3	74.73'	154.13'
4	83.20'	131.23'
5	98.62'	122.62'
6	93.61'	146.15'

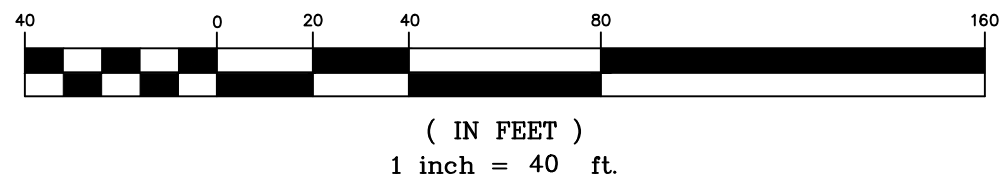
## ZONING COMPLIANCE CHART - R-10 DISTRICT

CATEGORY	REQUIRED	PROPOSED
MINIMUM LOT AREA	10,500 SF	10,987 S.F. AND GREATER
AVERAGE LOT WIDTH	70'	74.73' AND GREATER
MINIMUM LOT DEPTH	100'	122.62' AND GREATER
MINIMUM FRONT YARD	30'+	30.0'
MINIMUM SIDE YARD (MAIN BUILDING)	10	10.0'
MINIMUM SIDE YARD (ACCESSORY BUILDING)	2'	NONE PROPOSED
MINIMUM SIDE YARD (PARKING AREA)	2'	ALL ARE 5' AND GREATER
MINIMUM REAR YARD (MAIN BUILDING)	30'	30'
MINIMUM REAR YARD (ACCESSORY BUILDING)	2'	NONE PROPOSED
MINIMUM REAR YARD (PARKING AREA)	2'	ALL ARE 76' AND GREATER
MAXIMUM BUILDING HEIGHT (STORIES)	2.5	2.5 STORIES AND LESS
MAXIMUM BUILDING HEIGHT (FEET)	30'	LESS THAN 30'
MAXIMUM HEIGHT ACCESSORY BUILDING (STORIES)	1.5	NONE PROPOSED
MAXIMUM HEIGHT ACCESSORY BUILDING (FEET)	15'	NONE PROPOSED
MAXIMUM LOT COVERAGE	30%	ALL ARE 18.3% AND LESS
MAXIMUM HORIZONTAL DIMENSIONS PER BUILDING	250'	190'

\* 30' F.Y. PROPOSED BY THE DEVELOPER



## GRAPHIC SCALE



## NOTES:

- LOT 1 SHALL NOT BE ALLOWED DIRECT DRIVEWAY ACCESS TO TUNXIS ROAD

## REFERENCE MAPS:

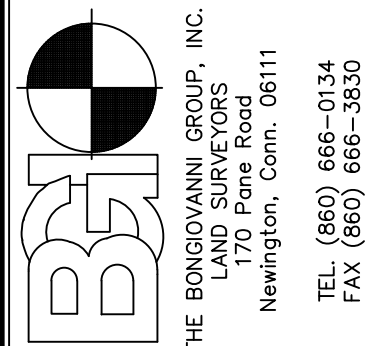
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- "TOWN OF FARMINGTON, HIGHWAY MAP, MIDDLE ROAD, FROM OLD SOUTH ROAD EASTERLY TO WEST HARTFORD, SCALE 1"=40', DATE JAN. 1940, SHEETS 3 & 4 OF 5, TOWN ENGINEER."

## NOTES:

- THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996;  
  
TYPE OF SURVEY: ORIGINAL SURVEY  
  
BOUNDARY DETERMINATION CATEGORY: RESURVEY  
  
CLASS OF HORIZONTAL ACCURACY: A-2  
CLASS OF BOUNDARY ACCURACY: A-2  
  
INTENDED USE: SUBDIVISION OF PROPERTY
- HORIZONTAL DATUM IS BASED ON NAD'83.
- THIS MAP IS VALID ONLY IF IT BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE UNDERSIGNED LAND SURVEYOR.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

SURVEYOR'S SIGNATURE DATE LICENSE NUMBER



Scale: 1"=40'	Date
Drawn: BTM	Checked: AB
Revision	
Date: 1-18-19	
REVISE EASEMENTS	6-27-19
TOWN COMMENTS	4-26-19

ORCHARDS HEIGHTS  
PREPARED FOR  
ORCHARD HEIGHTS DEVELOPERS LLC  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

SUBDIVISION  
MAP

316  
of



PROPOSED SANITARY  
SEWER MANHOLE  
SCHEDULE

SMH1  
STA -0+08  
T.F. 308.56  
INV. IN N = 299.83  
INV. OUT E = 299.83

SMH2  
STA 3+48.6 11.6'R  
T.F. 312.2  
INV. 303.41

NAD83

67'-8" (PERF.) HDPE (S=1.04%)

20'-6"PVC ROOF LEADER (S=1.0% MIN.)

CB20  
TYPE C-L  
(4'-DEEP SUMP)  
T.F.=313.0  
F.L.=306.3 S,N,W  
F.L.=303.91 E

24'-6"PVC ROOF LEADER (S=1.0% MIN.)

8'-24" HDPE (S=2.0%)

LEGEND

EXISTING	PROPOSED

STORM SEWER NOTES:

- ALL HIGH DENSITY POLYETHYLENE (HDPE) STORM DRAINAGE PIPING SHALL BE SHALL BE IN CONFORMANCE WITH ASTM D3350. REINFORCED CONCRETE PIPE SHALL CONFORM TO CONDOT MATERIAL SPECIFICATION SECTION M.08.01(6).
- ALL CATCH BASINS SHALL HAVE 2' DEEP SUMPS UNLESS NOTED OTHERWISE.
- REFER TO CONSTRUCTION SEQUENCE FOR INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES.
- SUBGRADE DETENTION SYSTEM SHALL BE MODEL MC-3500 MANUFACTURED BY STORMTECH, OR APPROVED EQUAL. ANY SUBSTITUTION SHALL BE REVIEWED AND APPROVED BY THE DESIGN ENGINEER.
- ALL CATCH BASINS SHALL BE FITTED WITH CATCH BASIN INLET PROTECTION DURING CONSTRUCTION.
- WATER QUALITY STRUCTURE (WQS-1) SHALL BE DESIGNED TO TREAT A WATER QUALITY FLOW = 0.4 CFS AND PASS A DESIGN FLOW = 3.5 CFS. THE STRUCTURE SHALL BE A CONTECH#MODEL CDS2015-4. ANY SUBSTITUTION SHALL BE A MODEL AND MANUFACTURER FROM THE CTDOT LIST OF APPROVED HYDRODYNAMIC SEPARATORS AND SHALL BE REVIEWED BY THE DESIGN ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.
- CONTRACTOR IS RESPONSIBLE FOR DEWATERING DURING CONSTRUCTION IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL FOOTING DRAINS REQUIRE SUMP PUMPS WITH BACKWATER VALVES.

SUBGRADE DETENTION SYSTEM  
(24 TOTAL CHAMBERS)  
(ISOLATOR ROW - 8 CHAMBERS)  
BOTTOM ELEV=303.75 (STONE)  
TOP ELEV=309.25 (STONE)

OUTLET CONTROL  
STRUCTURE OCS-1  
T.F.=310.5  
F.L.=304.5 W (24" HDPE)  
F.L.=303.75 E (12" HDPE)  
F.L.=303.75 S (8" U.D.)  
F.L.=305.75 (4" ORIFICE)  
F.L.=303.75 (2" ORIFICE)  
F.L.=309.25 (WEIR)

LEVEL-SPREADER W/  
PERMANENT TURF  
REINFORCEMENT MATTING  
(9'Wx30'L)  
ELEV=303.7

LIMIT OF INLAND WETLANDS PER THE  
"OFFICIAL INLAND WETLANDS AND  
WATERCOURSES MAP FOR THE TOWN  
OF WEST HARTFORD"

SEE SHEET 16 FOR OPERATION AND MAINTENANCE  
PLAN FOR EROSION AND SEDIMENT CONTROL  
MEASURES DURING CONSTRUCTION AND FOR THE  
PROPOSED STORMWATER MANAGEMENT SYSTEM ON  
PRIVATE PROPERTY.

SURVEY NOTES:

- THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996;

TYPE OF SURVEY: PROPERTY & TOPOGRAPHIC SURVEY

BOUNDARY DETERMINATION CATEGORY: RESURVEY

CLASS OF HORIZONTAL ACCURACY: A-2

CLASS OF VERTICAL ACCURACY: V-2

CLASS OF BOUNDARY ACCURACY: A-2

CLASS OF TOPOGRAPHIC ACCURACY: T-2

SURFACE UTILITY ACCURACY: T-2

UNDERGROUND UTILITY ACCURACY: D (COMPILED)

INTENDED USE: DEPICT GRADING AND STORMWATER IMPROVEMENTS

2. HORIZONTAL DATUM IS BASED ON NAD83.

3. ELEVATIONS ARE BASED ON NAVD83

4. THIS MAP IS VALID ONLY IF IT BEARS THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE UNDERSIGNED LAND SURVEYOR.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

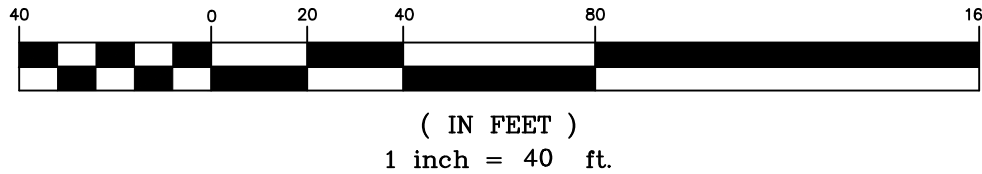
SURVEYOR'S SIGNATURE DATE LICENSE NUMBER

14649

87306

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GRAPHIC SCALE



GENERAL NOTES:

- SITE CONTRACTOR SHALL OBTAIN A PERMIT WITH THE TOWN OF FARMINGTON FOR EXCAVATION WITHIN THE ROW. A BOND WILL BE REQUIRED AS A CONDITION OF PERMIT.
- THE SANITARY SEWER CONTRACTOR SHALL OBTAIN A SANITARY SEWER PERMIT WITH THE TOWN OF FARMINGTON FOR CONNECTION TO THE TOWN SANITARY SEWER SYSTEM.
- ALL PROPOSED ELECTRIC SERVICE TO BE UNDERGROUND.

REFERENCE MAPS:

- "BOUNDARY SURVEY, MAP OF C.R. CASTALDI, 414 TUNXIS ROAD, WEST HARTFORD, CONN.", DATE: 3-23-88, SCALE: 1"=40', REVISED THROUGH 5-3-88, BY BGI, THE BONGIOVANNI GROUP, INC.
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Weston@Sampson

273 Davenport Road, Rocky Hill, CT 06067  
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THE BONGIOVANNI GROUP, INC.  
LAND SURVEYORS  
170 Fore Road  
Newington, Conn. 06111  
TEL: (860) 666-0134  
FAX: (860) 666-8830

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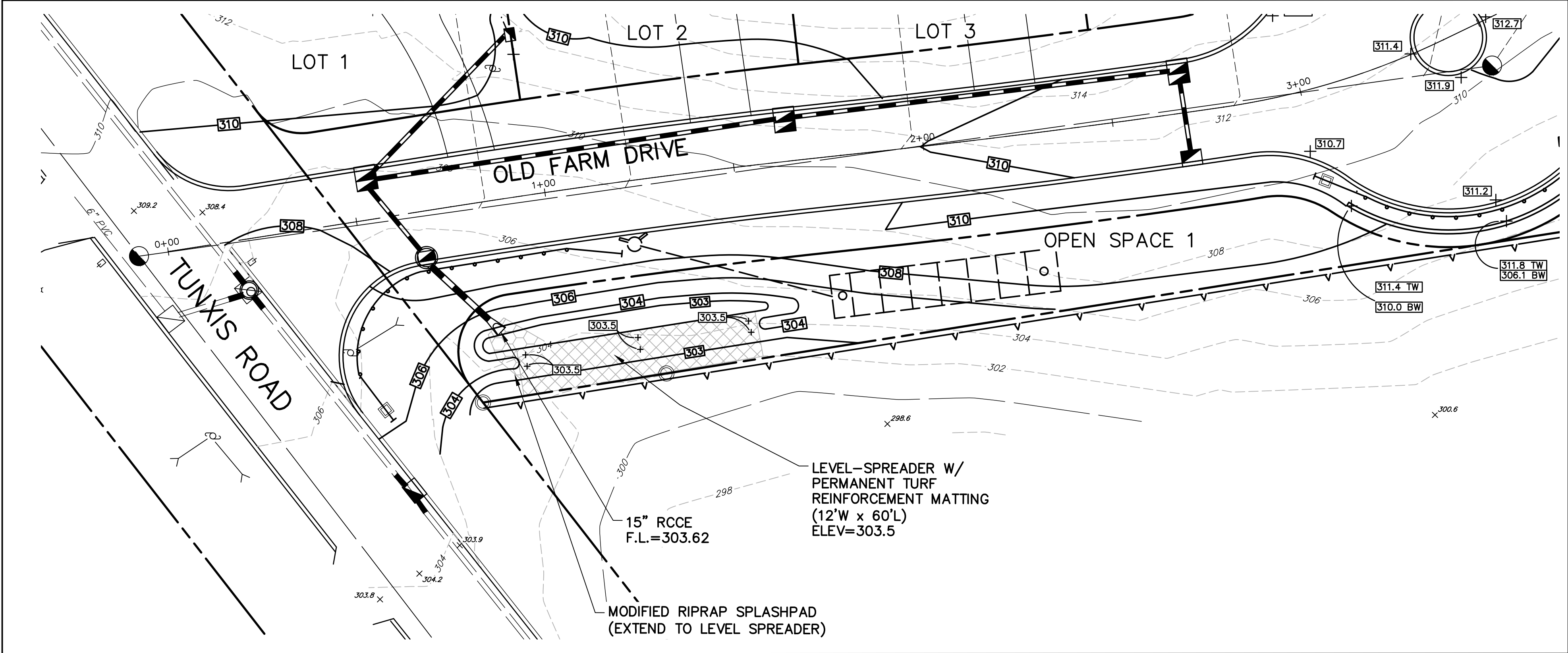
Revision	Date
TOWN COMMENTS	6-27-19
TOWN COMMENTS	5-31-19
TOWN COMMENTS	4-26-19

ORCHARD HEIGHTS DEVELOPERS LLC  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

GRADING & UTILITIES

Sheet 4 of 16

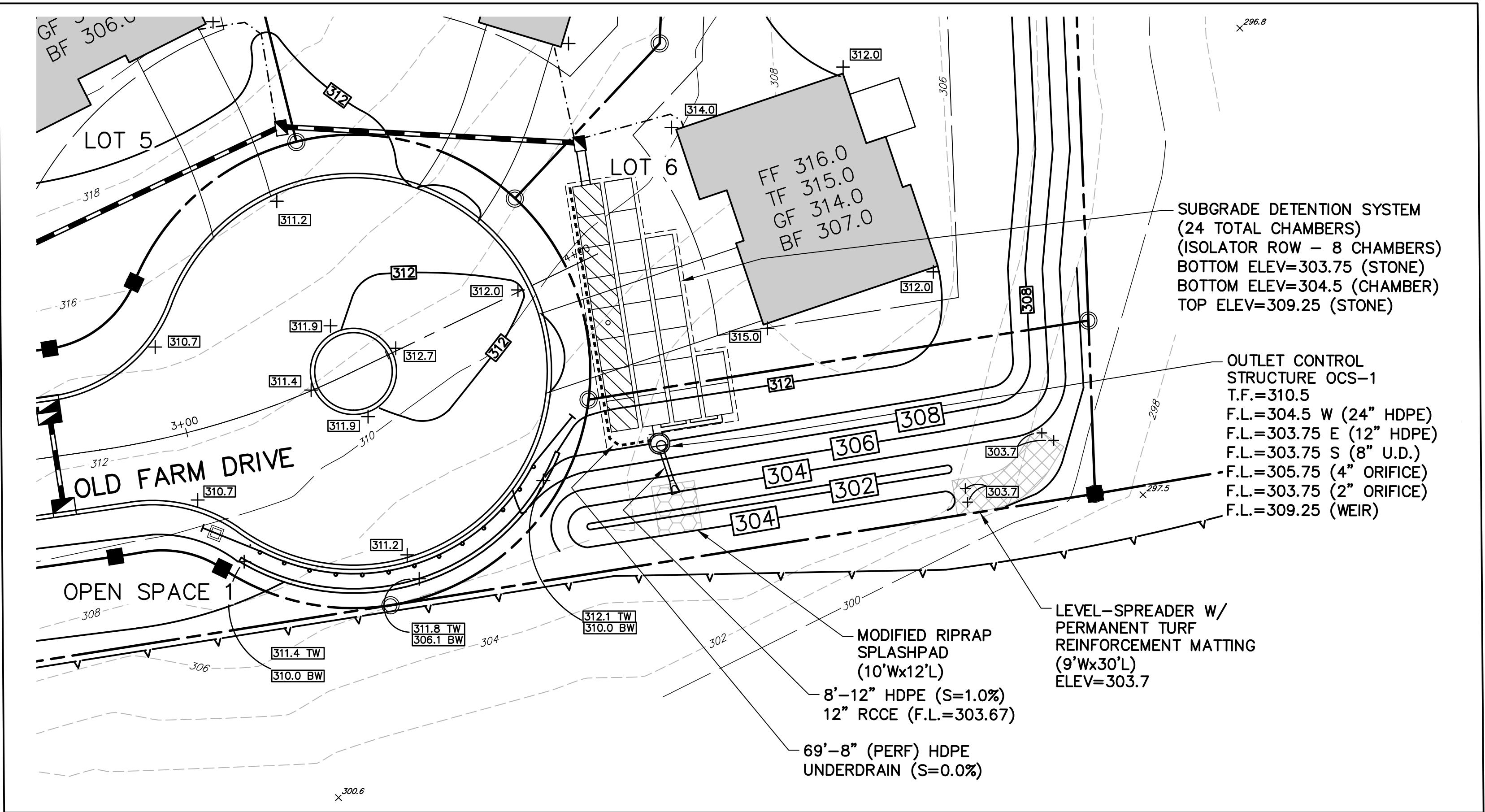
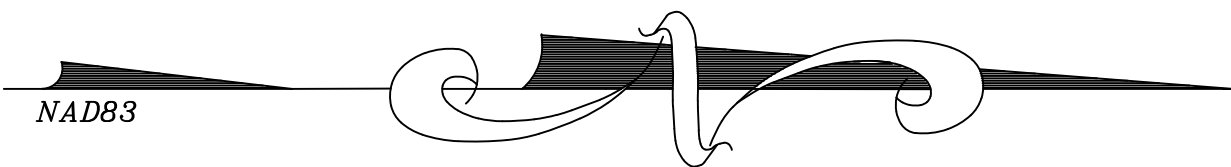




GRADING ENLARGEMENT – OPEN SPACE 1

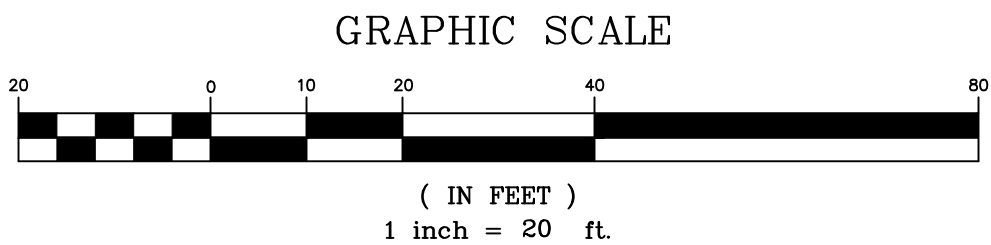
SCALE  
1"=20'

LEGEND	
EXISTING	PROPOSED
	CATCH BASIN
	MANHOLE
	ELEVATION CONTOUR
	SPOT ELEVATION
	SPOT ELEVATION AT TOP OF WALL
	SPOT ELEVATION AT BOTTOM OF WALL
	TREE LINE
	6" PVC ROOF LEADER
	FOOTING DRAIN
	DIRECTION OF SURFACE FLOW
	STORM SEWER PIPE
	SIGN
	LIGHT STANDARD
	SANITARY LATERAL



GRADING ENLARGEMENT – OPEN SPACE 2

SCALE  
1"=20'



WESTON & SAMPSON

275 DIVERS ROAD, ROCKY HILL, CT 06067

860.513.1473

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B5

THE BONGIOVANNI GROUP, INC.

LAND SURVEYORS

170 PINE ROAD

Newington, Conn. 06111

TEL: (860) 666-0134

FAX: (860) 666-3830

Scale: 1"=20'

Date:

Drawn: BTM

Checked: AB

Revision

TOWN COMMENTS

TOWN COMMENTS

TOWN COMMENTS

6-27-19

5-31-19

4-26-19

ORCHARD HEIGHTS DEVELOPERS LLC

PREPARED FOR

ORCHARD HEIGHTS DEVELOPERS LLC

380 TUNNIS ROAD

WEST HARTFORD, CONNECTICUT

GRADING ENLARGEMENTS

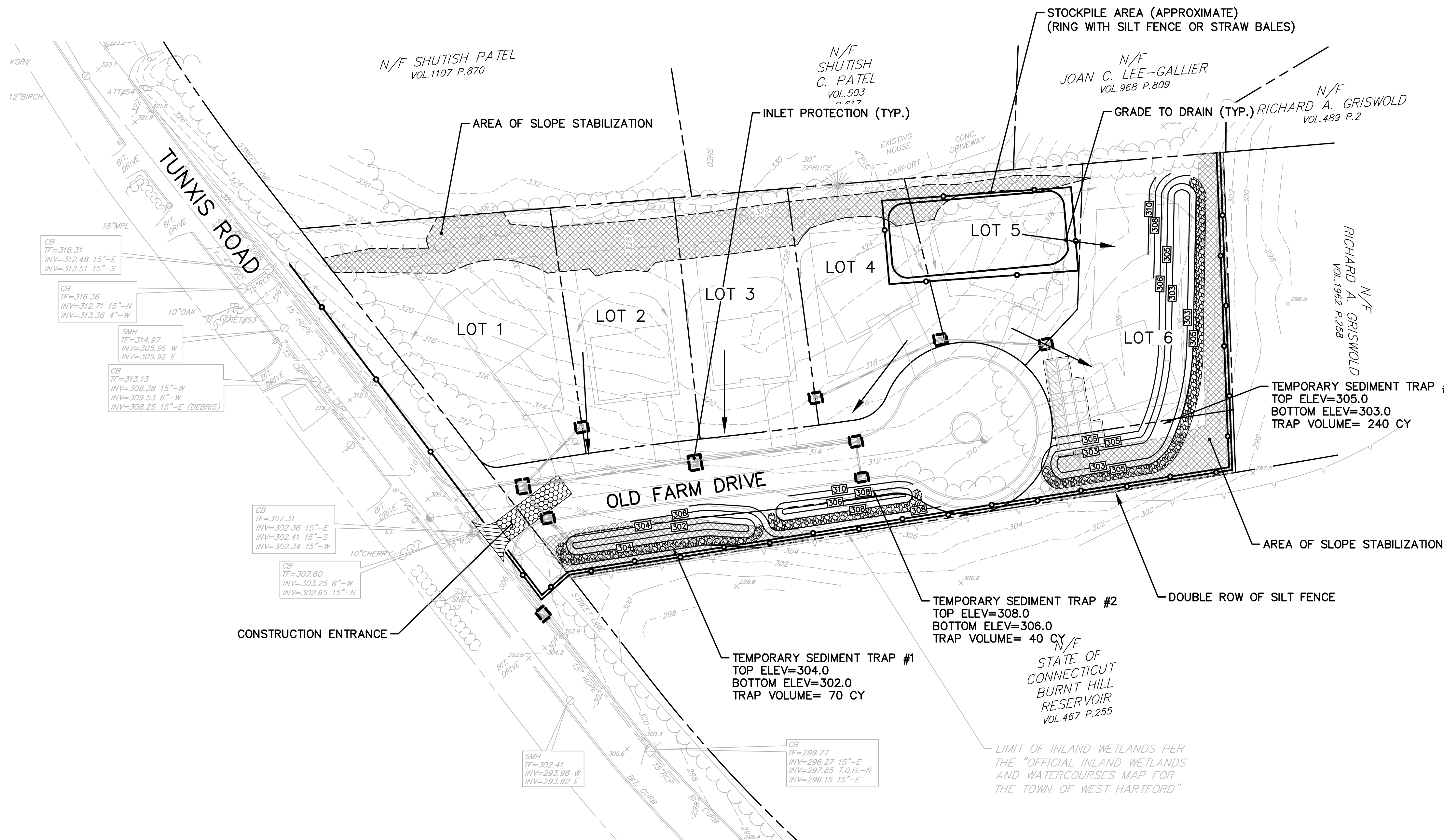
20 SCALE

5

16

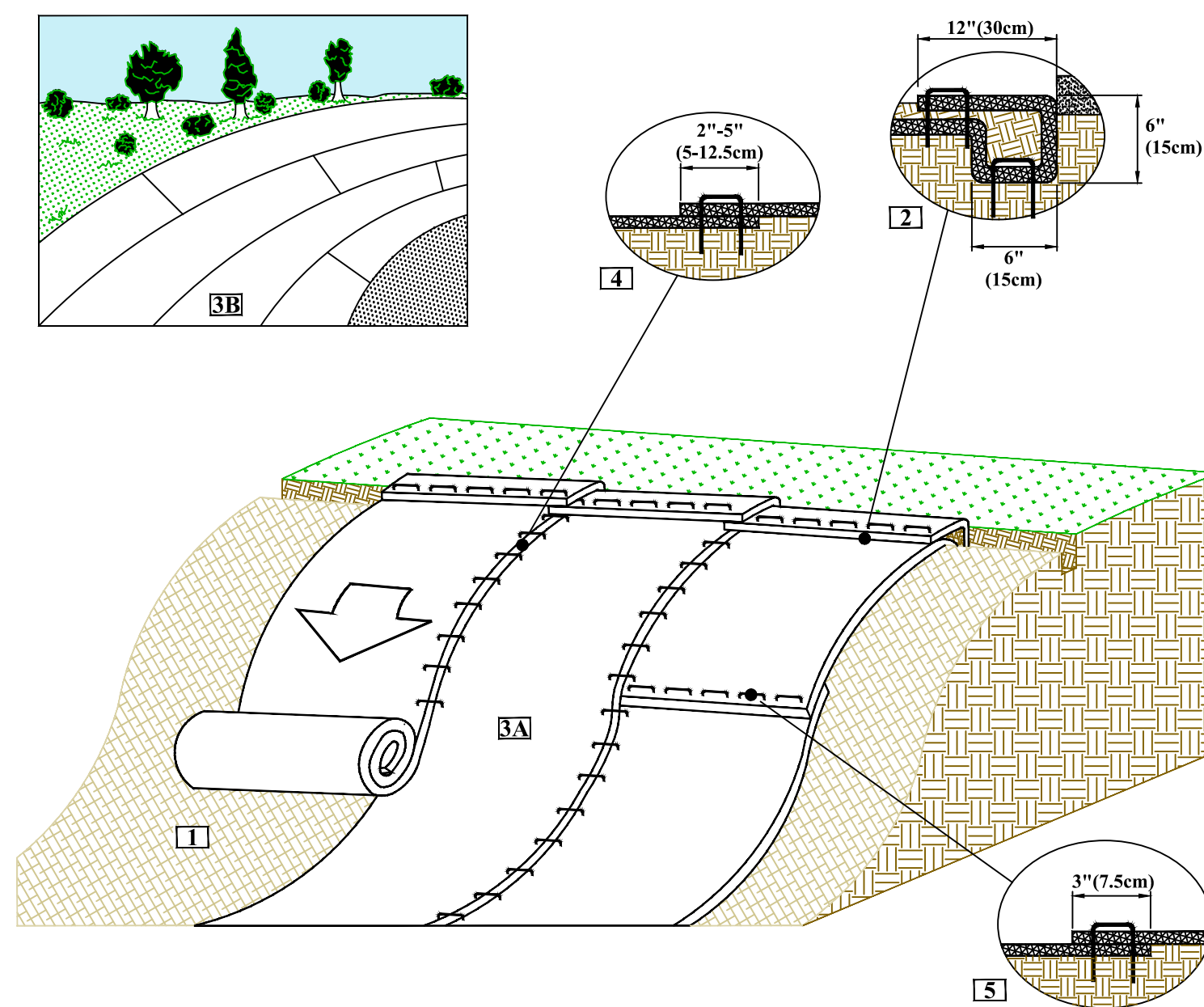
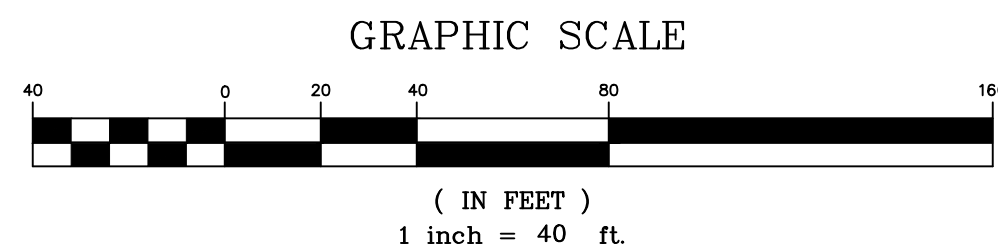
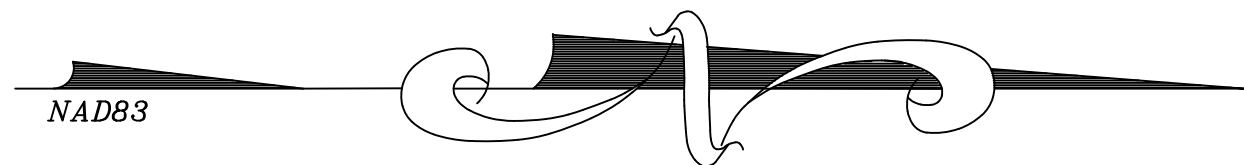
87306





LEGEND	
EXISTING	PROPOSED

**SLOPE STABILIZATION NOTE**  
ALL AREAS WITH SLOPES GREATER THAN 2:1 SLOPE TO BE STABILIZED WITH EROSION CONTROL BLANKET (NORTH AMERICAN GREEN ERONET DS75 OR APPROVED EQUAL)



**SLOPE  
INSTALLATION  
DETAIL**

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12"(30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12"(30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2"-5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

\*NOTE:  
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECPs.

**SLOPE STABILIZATION DETAIL**  
NOT TO SCALE

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170 Fore Road  
Newington, Conn. 06111  
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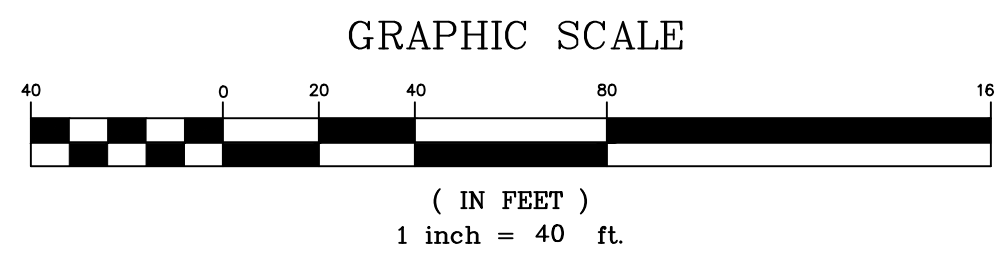
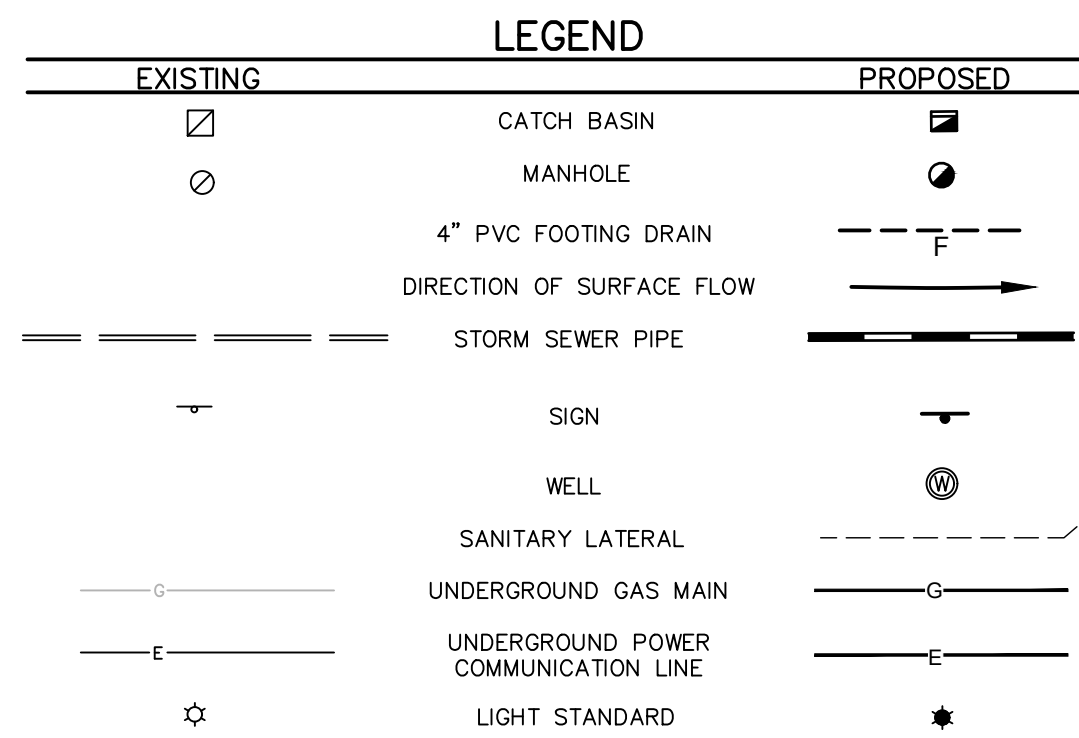
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Revision	
TOWN COMMENTS	6-27-19
TOWN COMMENTS	5-31-19
TOWN COMMENTS	4-26-19

ORCHARD HEIGHTS  
PREPARED FOR  
**ORCHARD HEIGHTS DEVELOPERS LLC**  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

EROSION  
&  
SEDIMENT  
CONTROL  
PLAN

Sheet  
**616**  
of



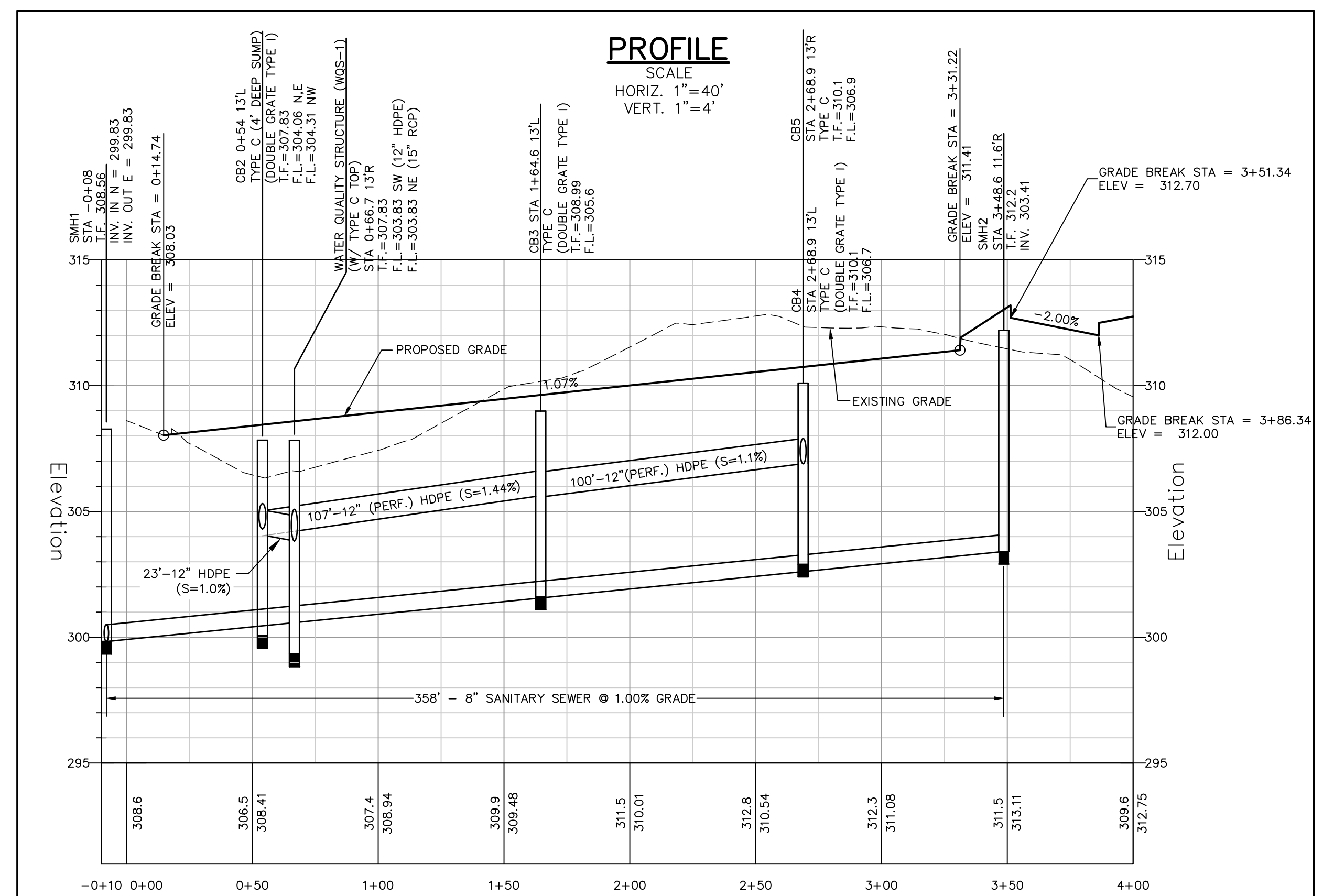
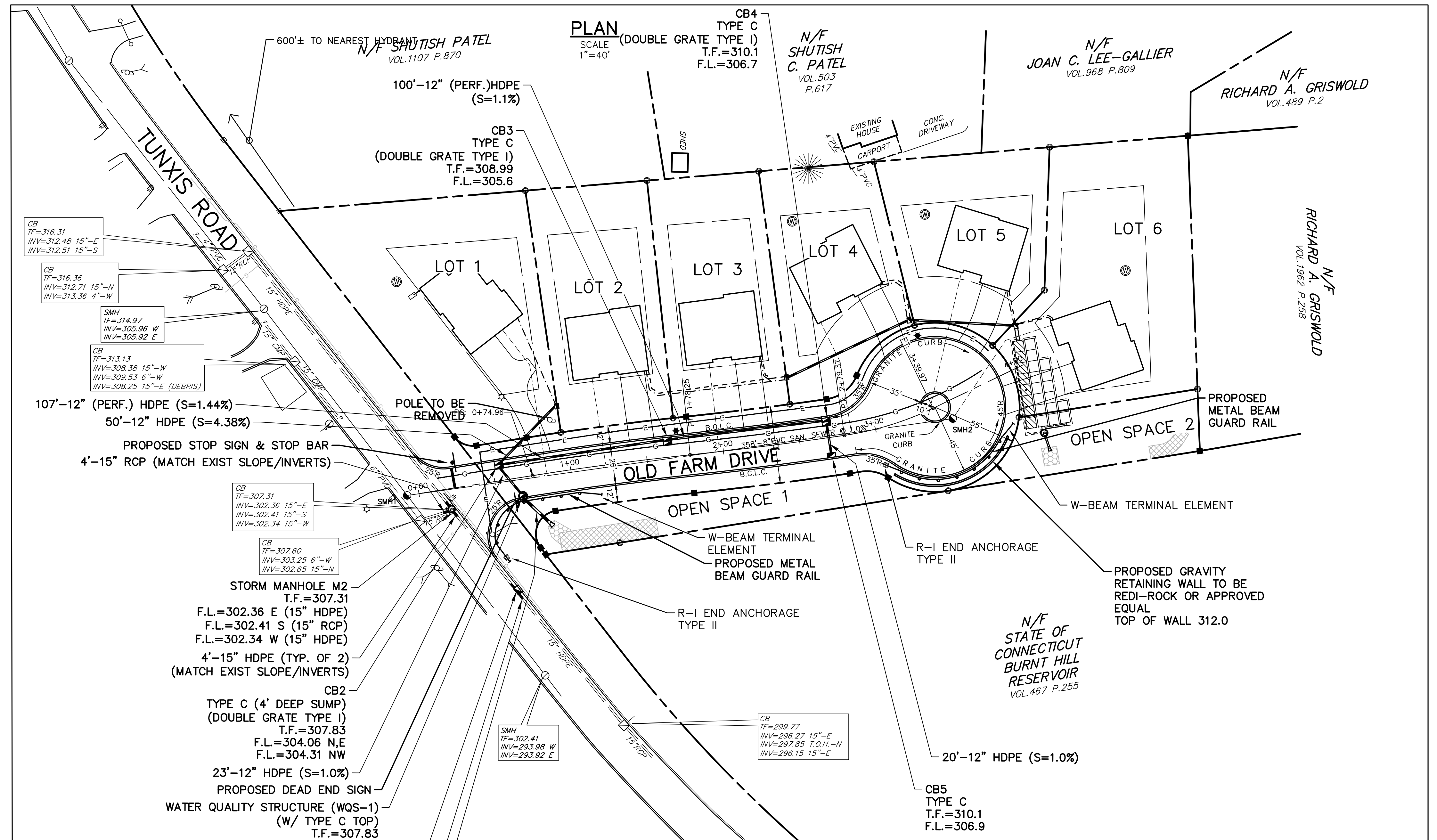
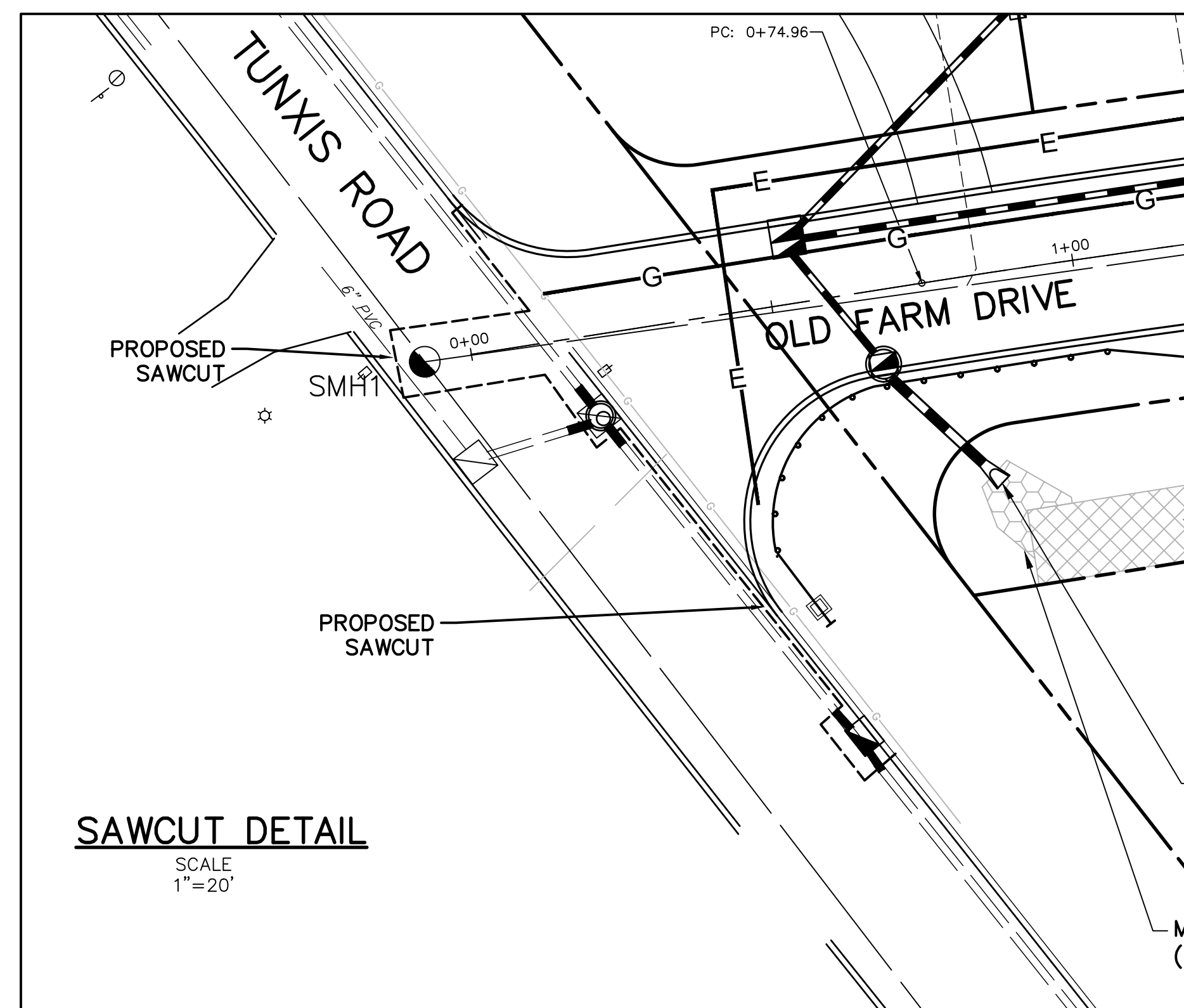


THIS DRAWING HAS BEEN PREPARED BASED, IN PART, ON INFORMATION PROVIDED BY OTHERS RELATING TO THE LOCATION OF UNDERGROUND SERVICES. WE CAN NOT VERIFY THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT. INDICATED UNDERGROUND UTILITIES ARE BASED ON AVAILABLE DATA. THE LOCATIONS ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. CALL "CALL B-4-U DIG" AT 1-800-922-4455 PRIOR TO ANY EXCAVATION.

**PROPOSED SANITARY SEWER MANHOLE SCHEDULE**

SMH1  
STA -0+08  
T.F. 308.56  
INV. IN N = 299.83  
INV. OUT E = 299.83

SMH2  
STA 3+48.6 11.6'R  
T.F. 312.2  
INV. 303.41



ORCHARD HEIGHTS  
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380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

ROADWAY  
PLAN  
&  
PROFILE

Sheet  
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of

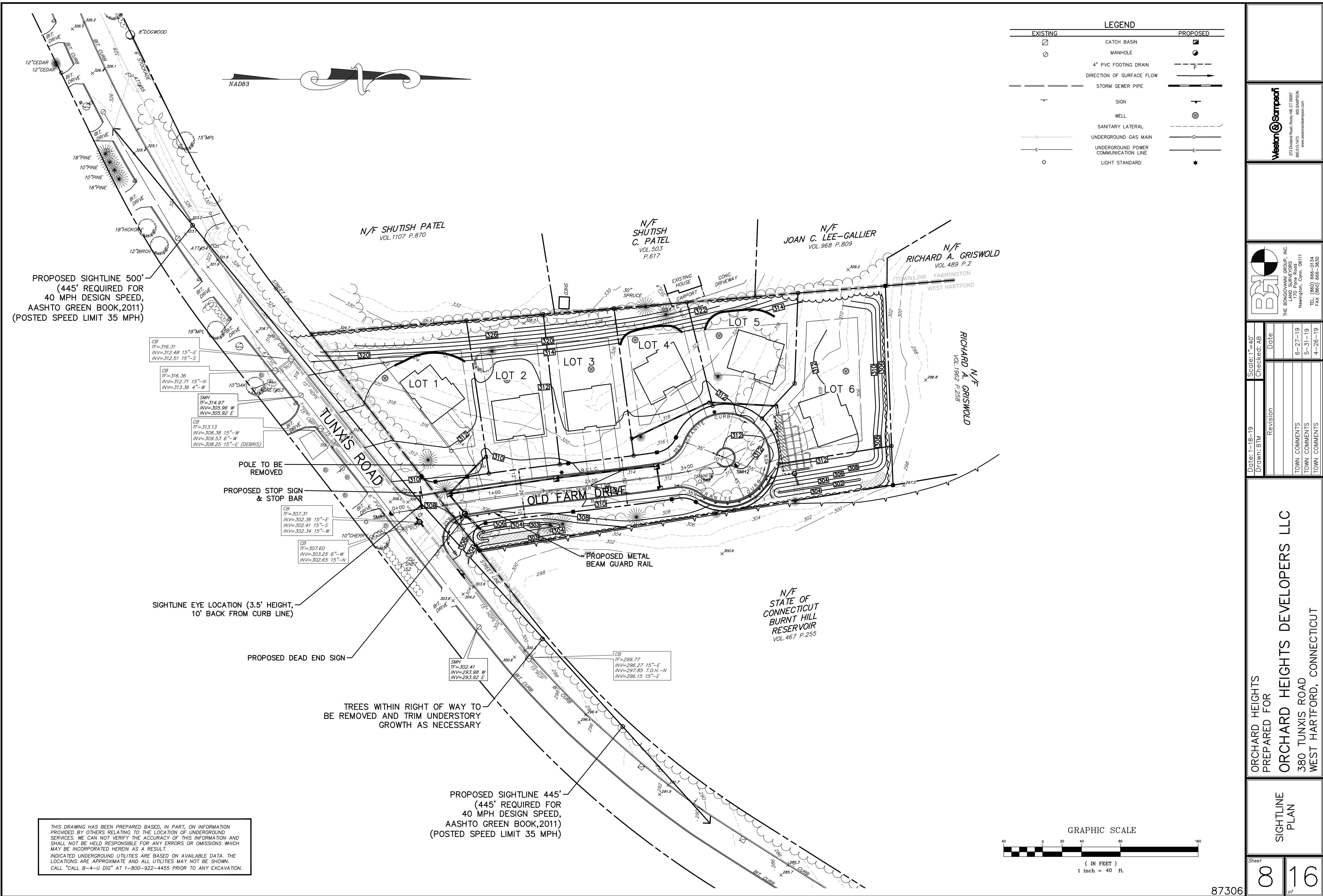
**B5**  
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LAND SURVEYORS  
170 Fore Road  
Newington, Conn. 06111  
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Date: 1-18-19	Scale: 1"=40'
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	Date
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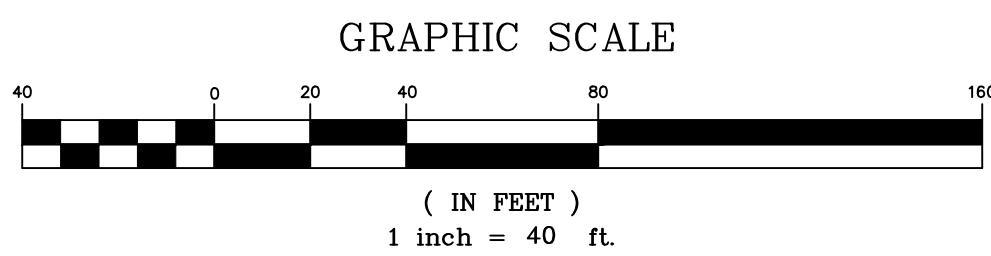
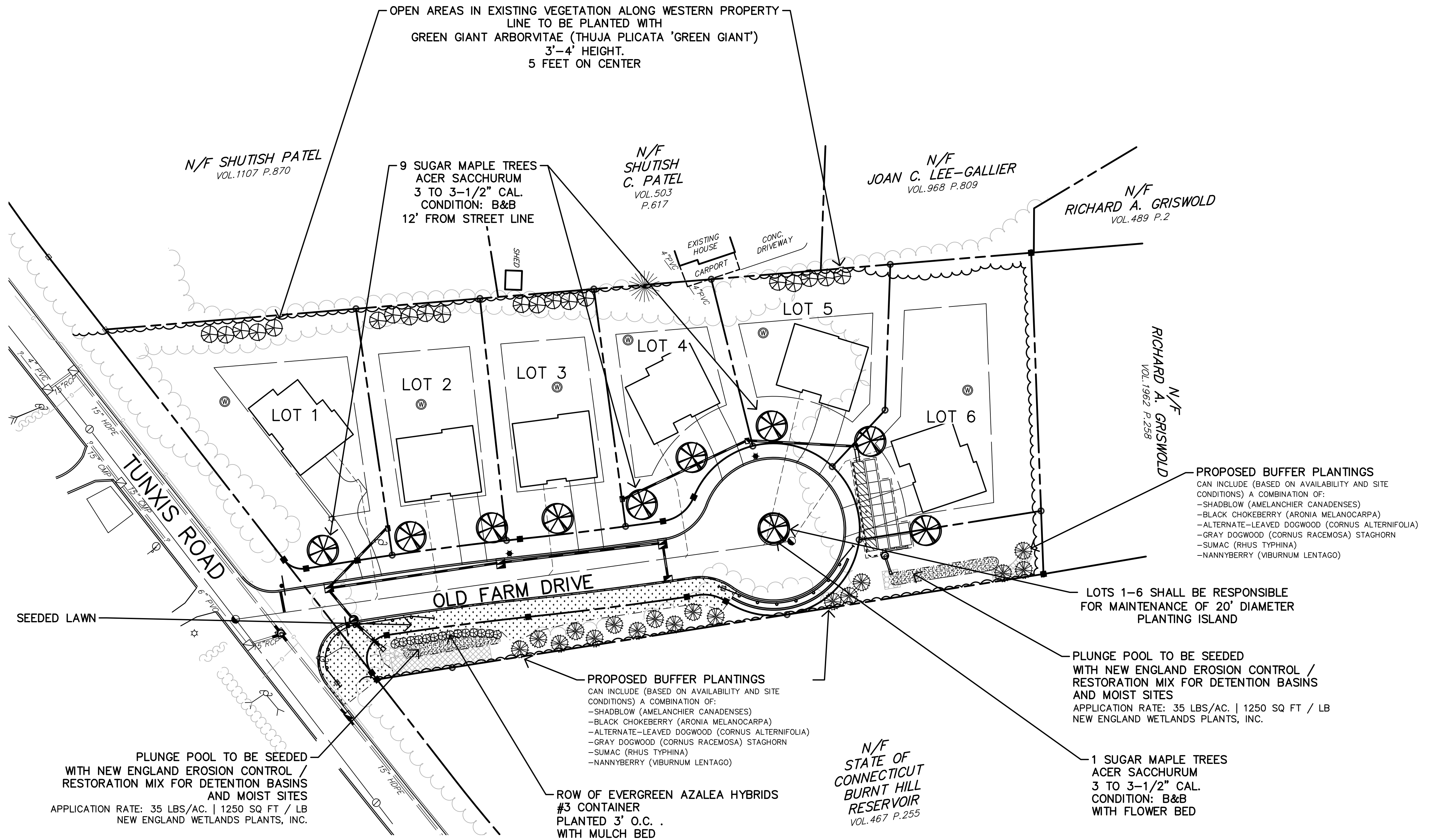
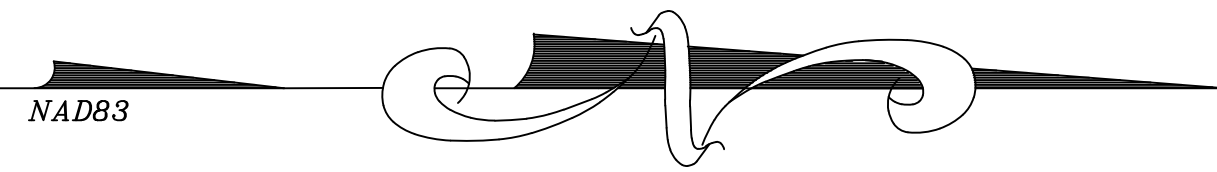
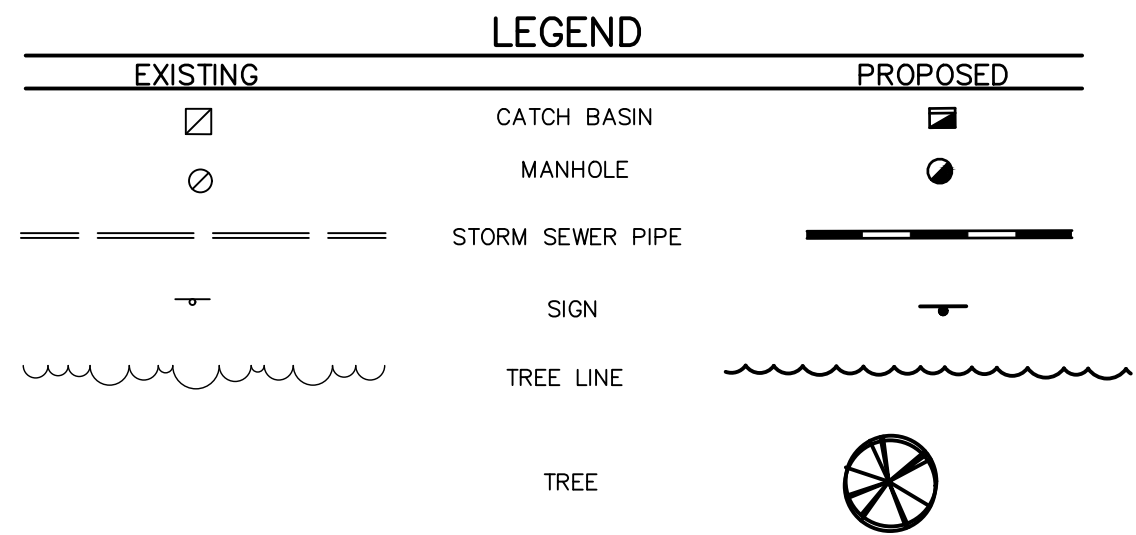
ORCHARD HEIGHTS  
PREPARED FOR  
**ORCHARD HEIGHTS DEVELOPERS LLC**  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

ROADWAY  
PLAN  
&  
PROFILE

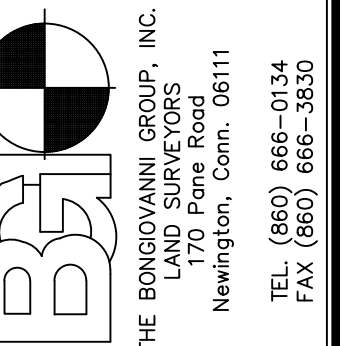
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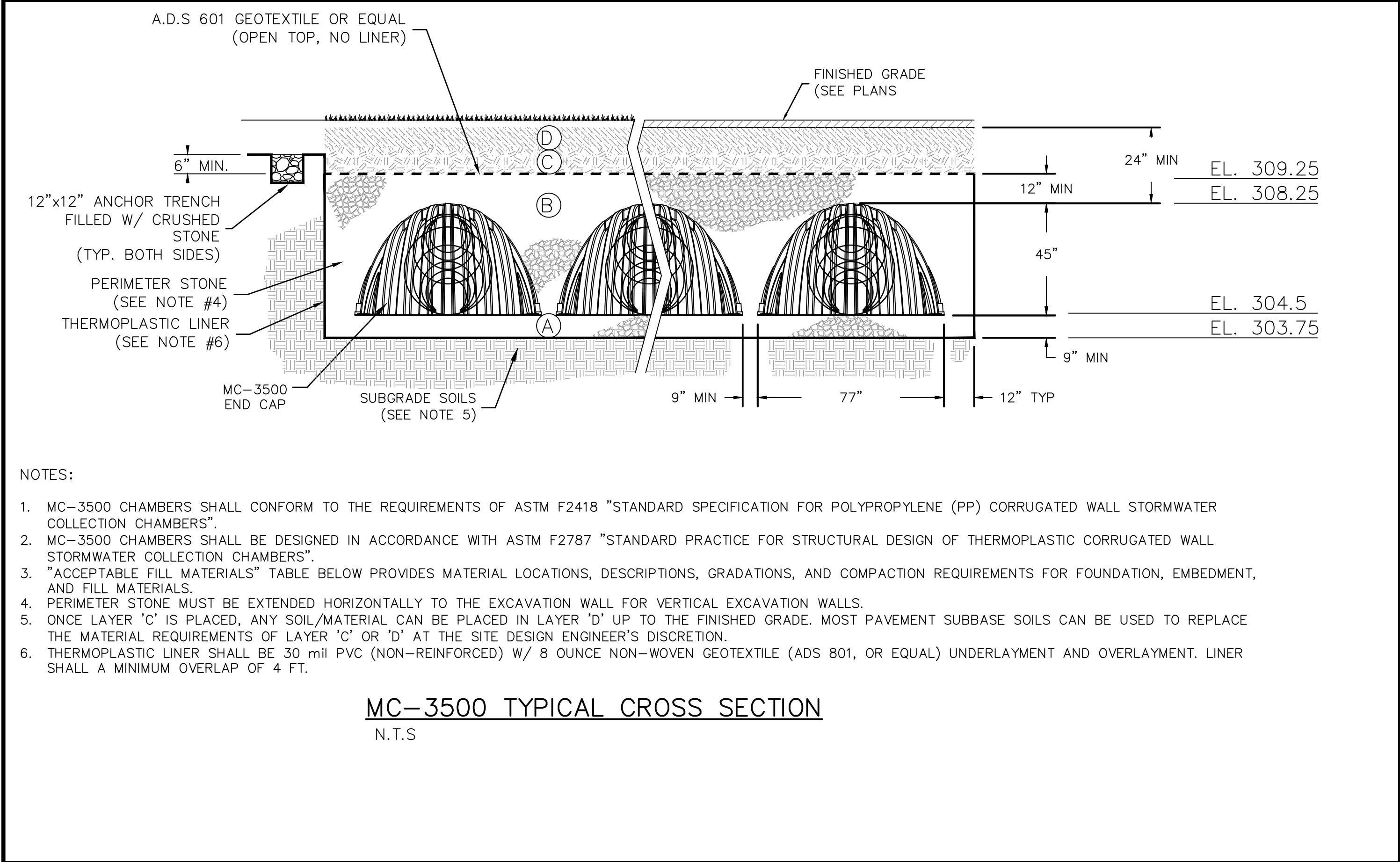
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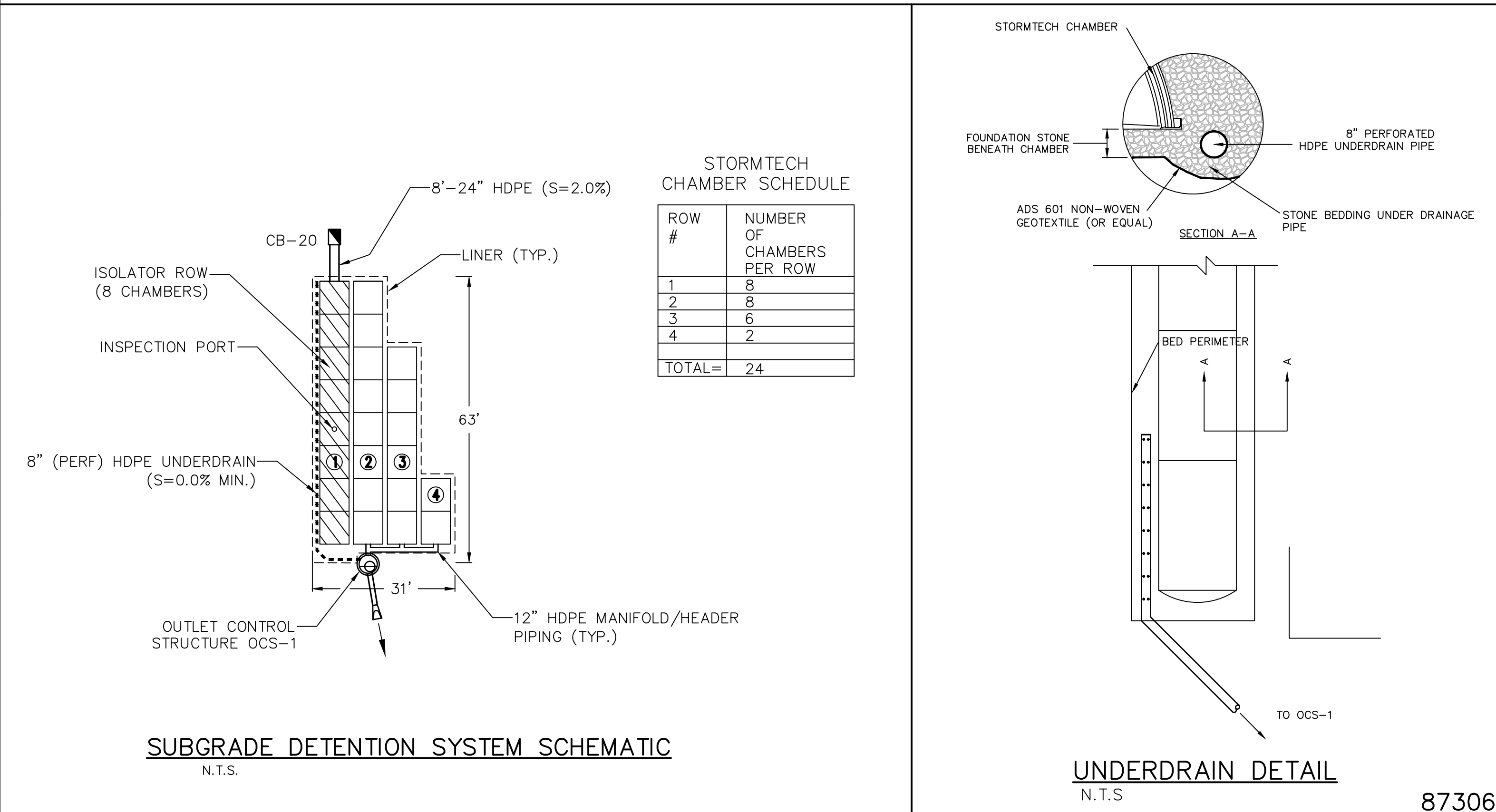
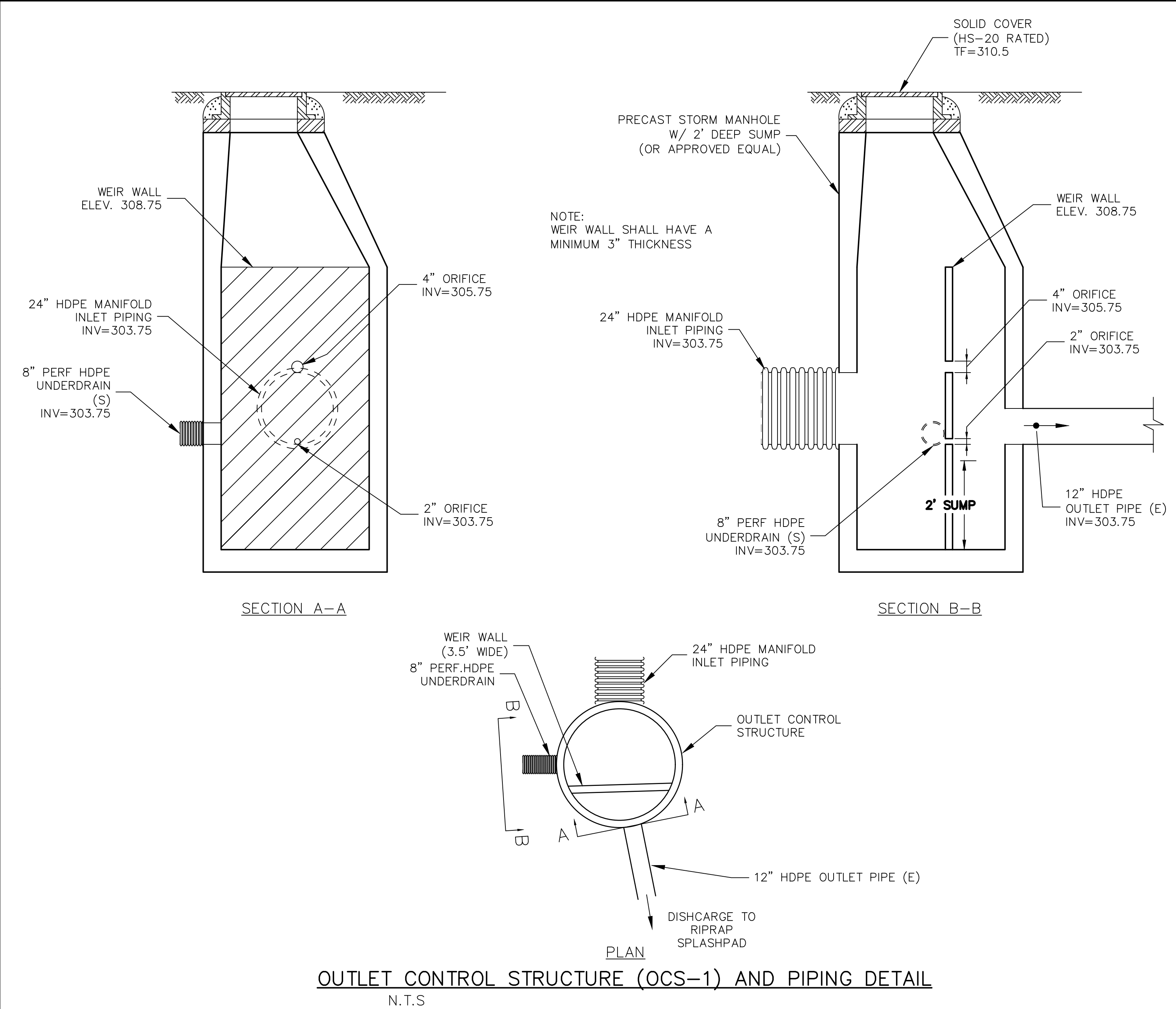
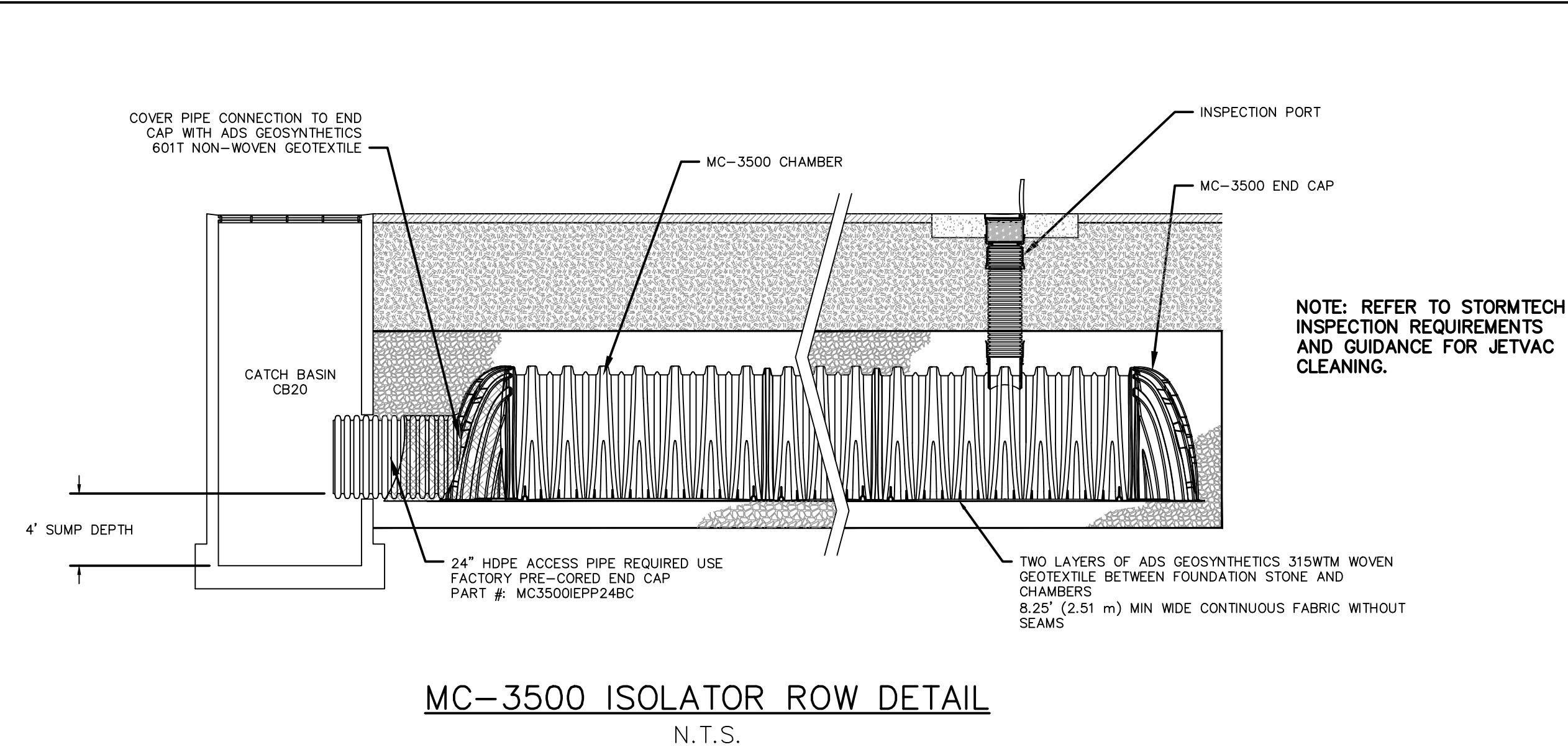
PLANTING  
PLAN



MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX. LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2a</sup>

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.

**ACCEPTABLE FILL MATERIALS**  
**STORMTECH MC-3500 CHAMBER CHAMBER SYSTEMS**



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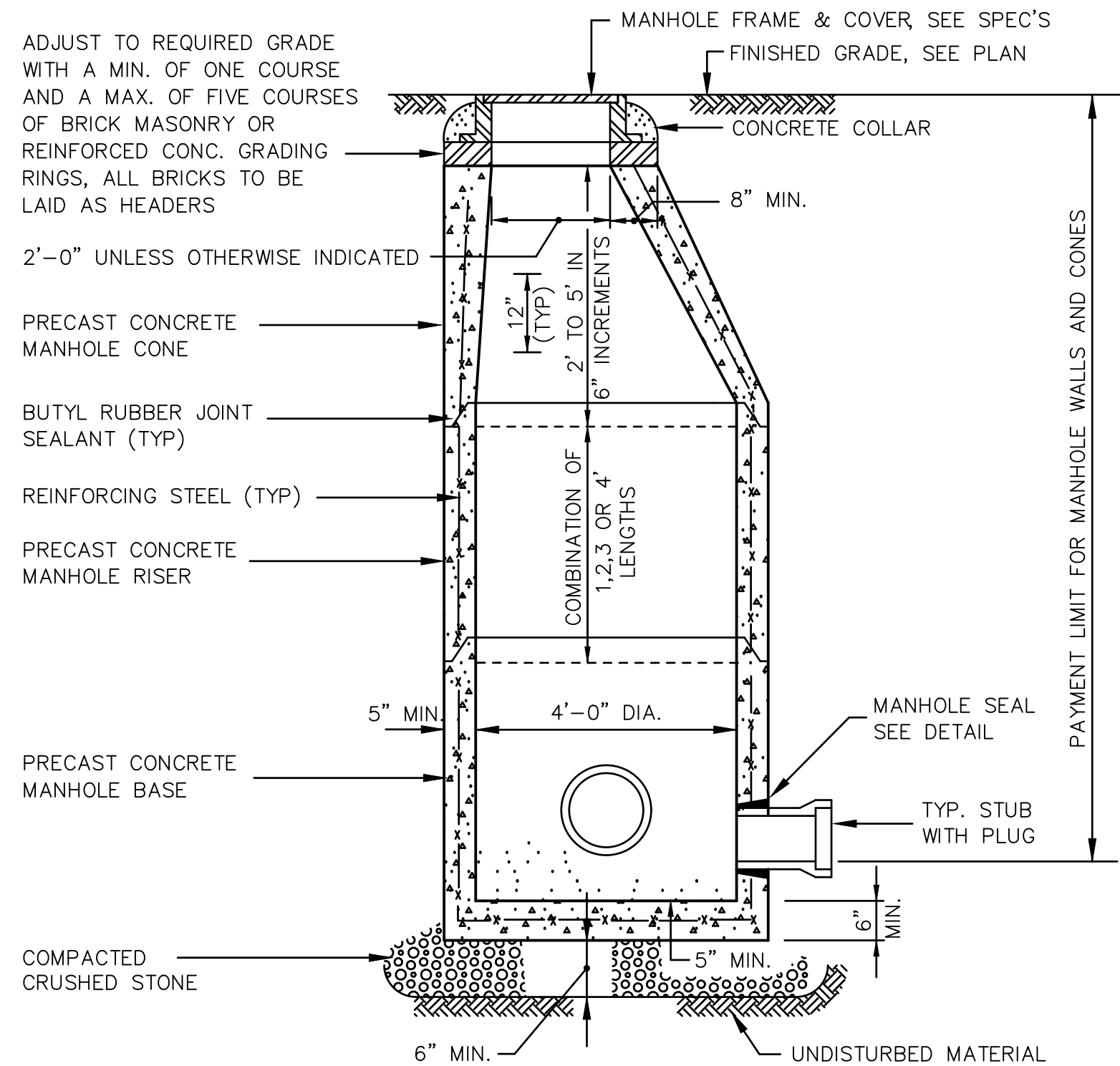
ORCHARD HEIGHTS DEVELOPERS LLC  
PREPARED FOR  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

STORMWATER DETAILS

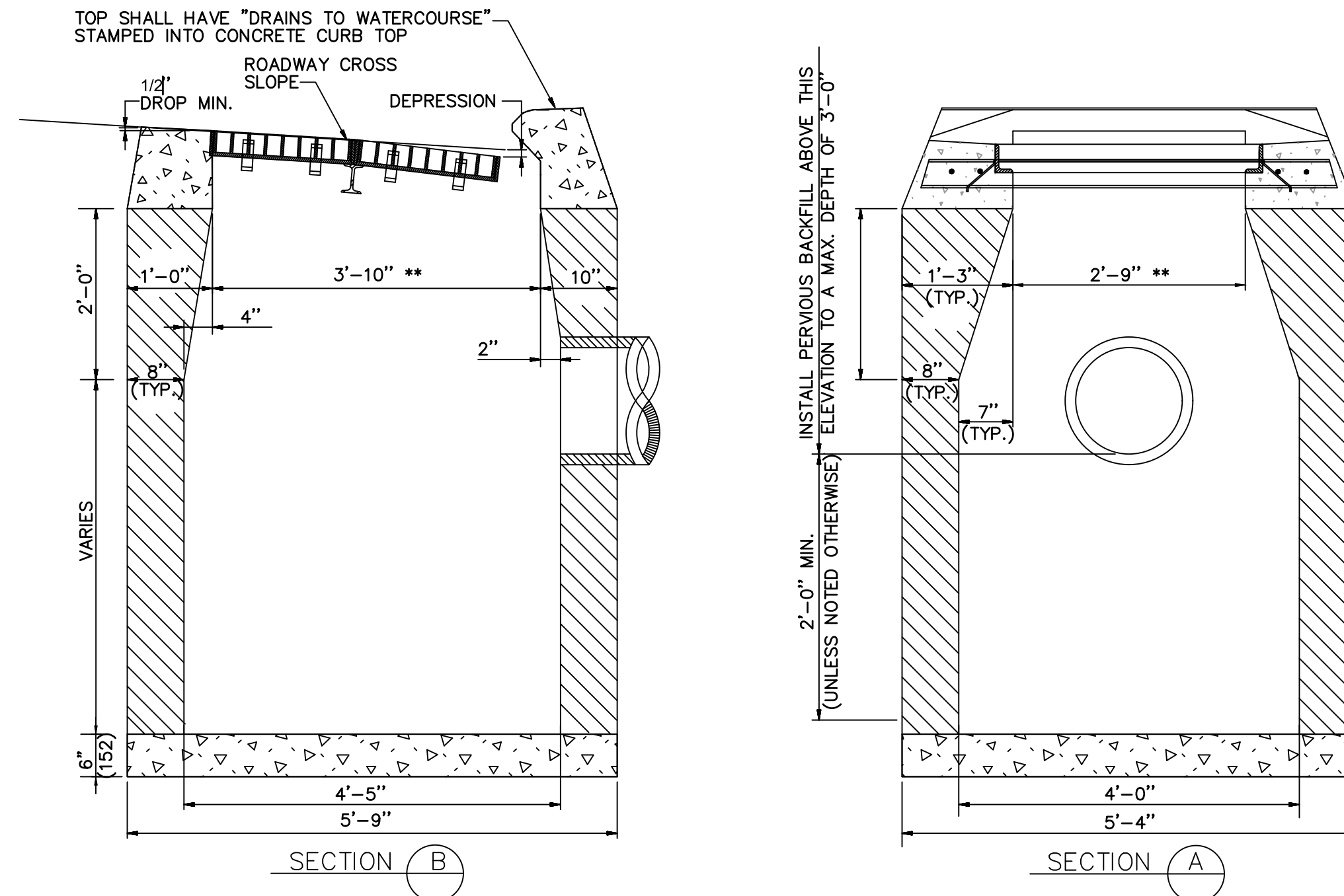
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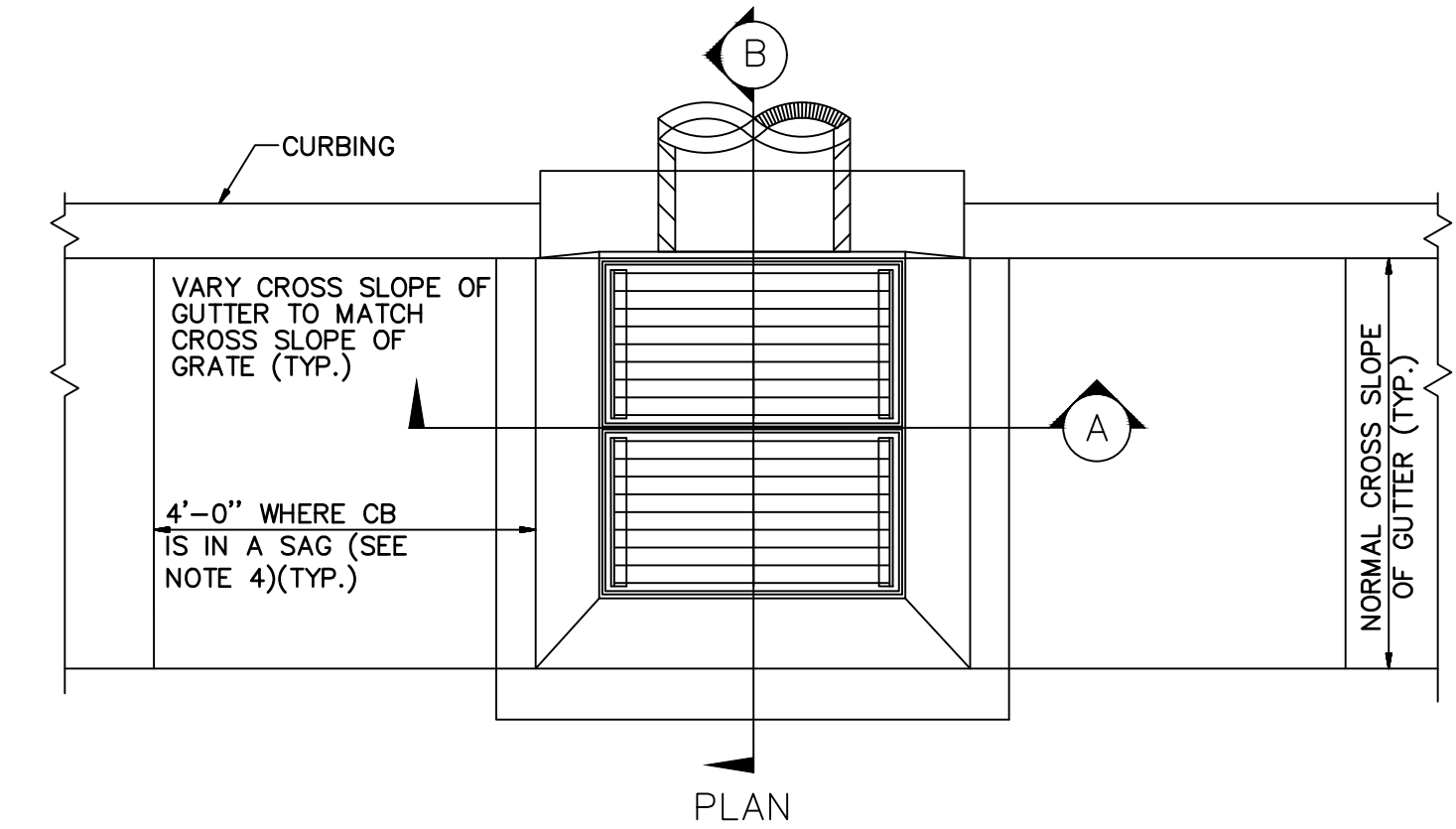
**4'-0" DIA. PRECAST CONCRETE STORM DRAIN MANHOLE DETAIL**  
N.T.S.



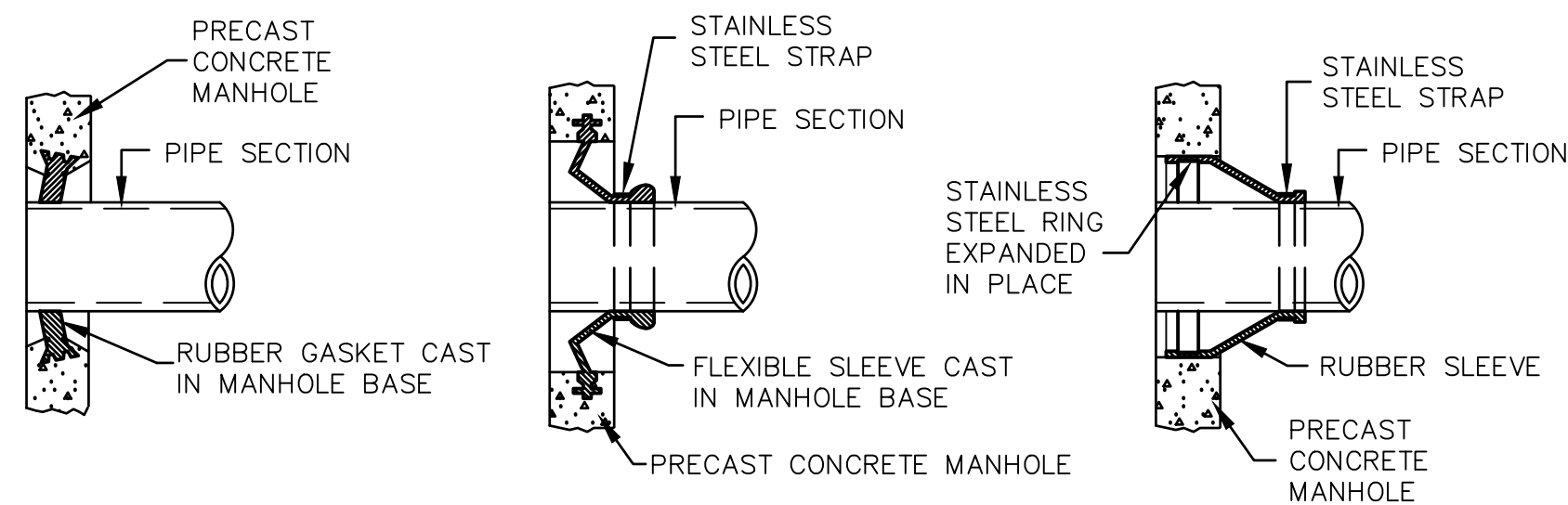
**TYPE "C" CATCH BASIN DOUBLE GRATE - TYPE I**  
N.T.S.

**GENERAL NOTES:**

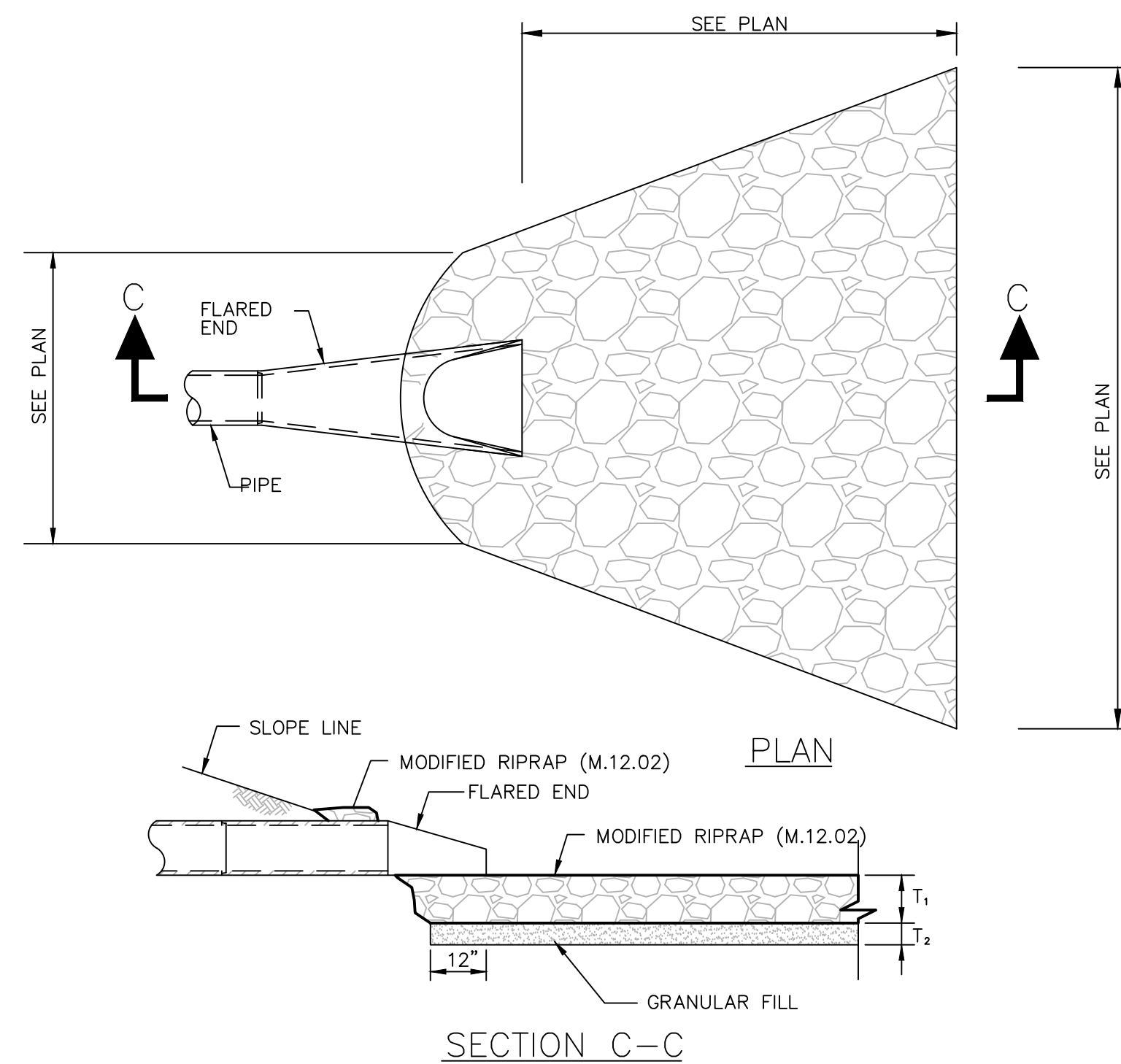
- FOR DETAILS OF FRAME AND GRATE SEE CTDOT STANDARD SHEET HW-507\_08.
- USE APPROPRIATE CONCRETE TOP FOR CURBING SHOWN ON PLANS. IF CURBING IS NOT SPECIFIED ON THE PLANS, IT SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER.
- ALL FACES OF STRUCTURES IN CONTACT WITH CONCRETE PAVEMENT SHALL BE COVERED WITH A LAYER OF TAR PAPER OR APPROVED EQUAL. THE COST FOR THE PAPER SHALL BE INCLUDED IN THE BID PRICE FOR THE TYPE OF CATCH BASIN INSTALLED.
- USE 6'-0" ON UPGRADE SIDE OF CONTINUOUS GRADE AND 1'-0" ON DOWNGRADE SIDE OF CONTINUOUS GRADE OR AS DIRECTED.
- IF MASONRY UNITS ARE REQUIRED, THE BASIN SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE OVER ALL DIMENSIONS SHOWN HERE AND SECTION 5.07 OF THE STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS. CORBELLING SHALL BE PERMITTED TO A MAXIMUM OF 3". NO PROJECTION SHALL EXTEND INSIDE THE LIMITS NOTED BY \*\*.
- WALL THICKNESS OF ALL CB'S OVER 10' DEEP SHALL BE INCREASED TO 12" THICK. INSIDE DIMENSION SHALL REMAIN THE SAME. (12" THICKNESS WILL START AFTER THE FIRST 10').
- TO CONVEY SUBSURFACE DRAINAGE, OPENINGS SHALL BE FORMED IN THE FOUR WALLS AT OR IMMEDIATELY ABOVE THE BOTTOM OF THE PERVIOUS BACKFILL.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH OF F'c = 4000 PSI (27,580 kPa) SHALL BE OBTAINED PRIOR TO SHIPPING.
- LATEST STATE OF CONNECTICUT'S STANDARD SPECIFICATIONS AND SUPPLEMENTALS SHALL GOVERN.



**DETAIL OF DEPRESSED GUTTER STRIP FOR TYPE "C" CATCH BASIN**

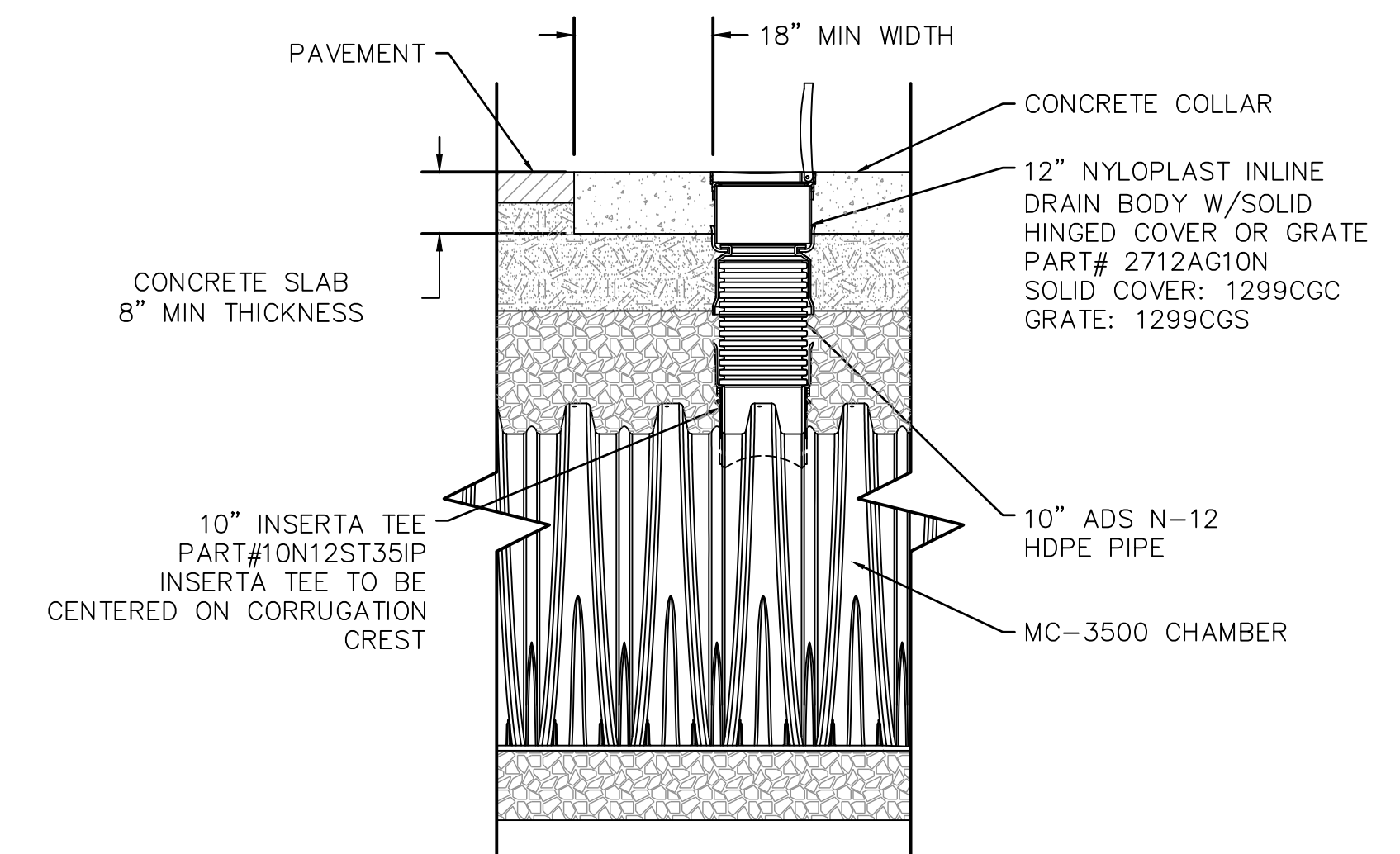


**MANHOLE AND TANK SEAL DETAILS**  
N.T.S.

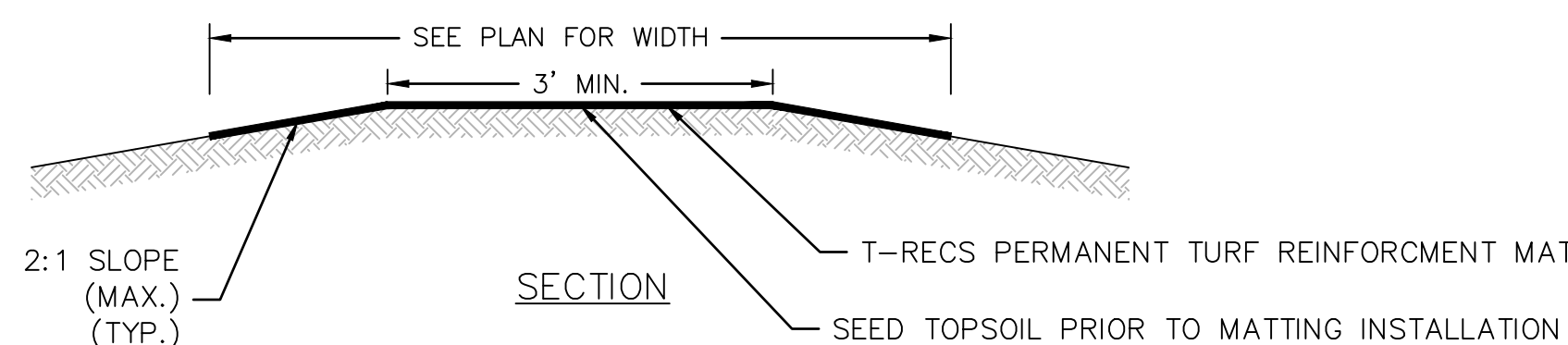


	RIPRAP TYPE	T <sub>1</sub> (RIPRAP)	T <sub>2</sub> (GRAVEL)
SPLASH PAD	MODIFIED RIPRAP	12"	6"

**MODIFIED RIPAP SPLASH PAD DETAIL**  
N.T.S.

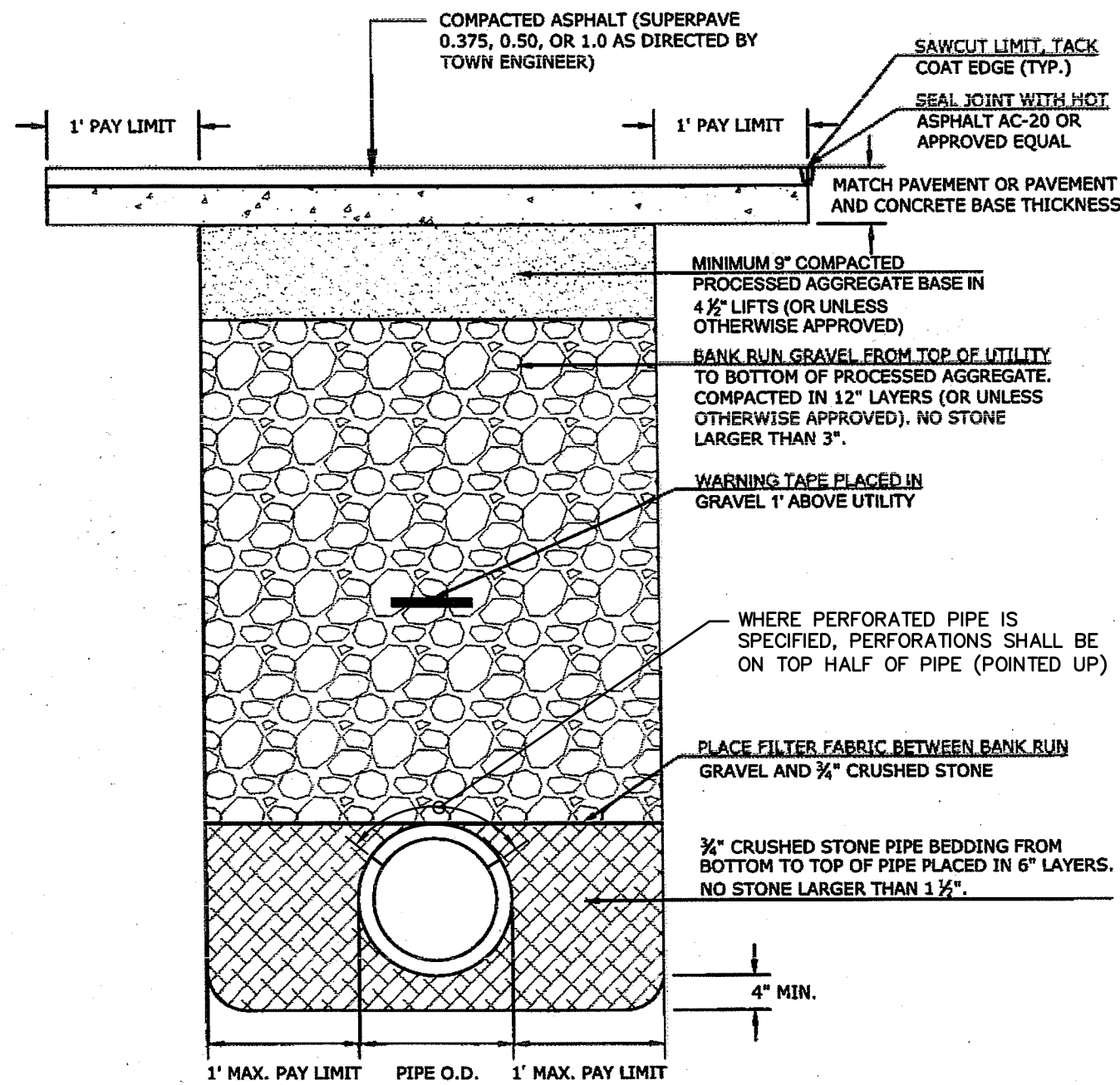
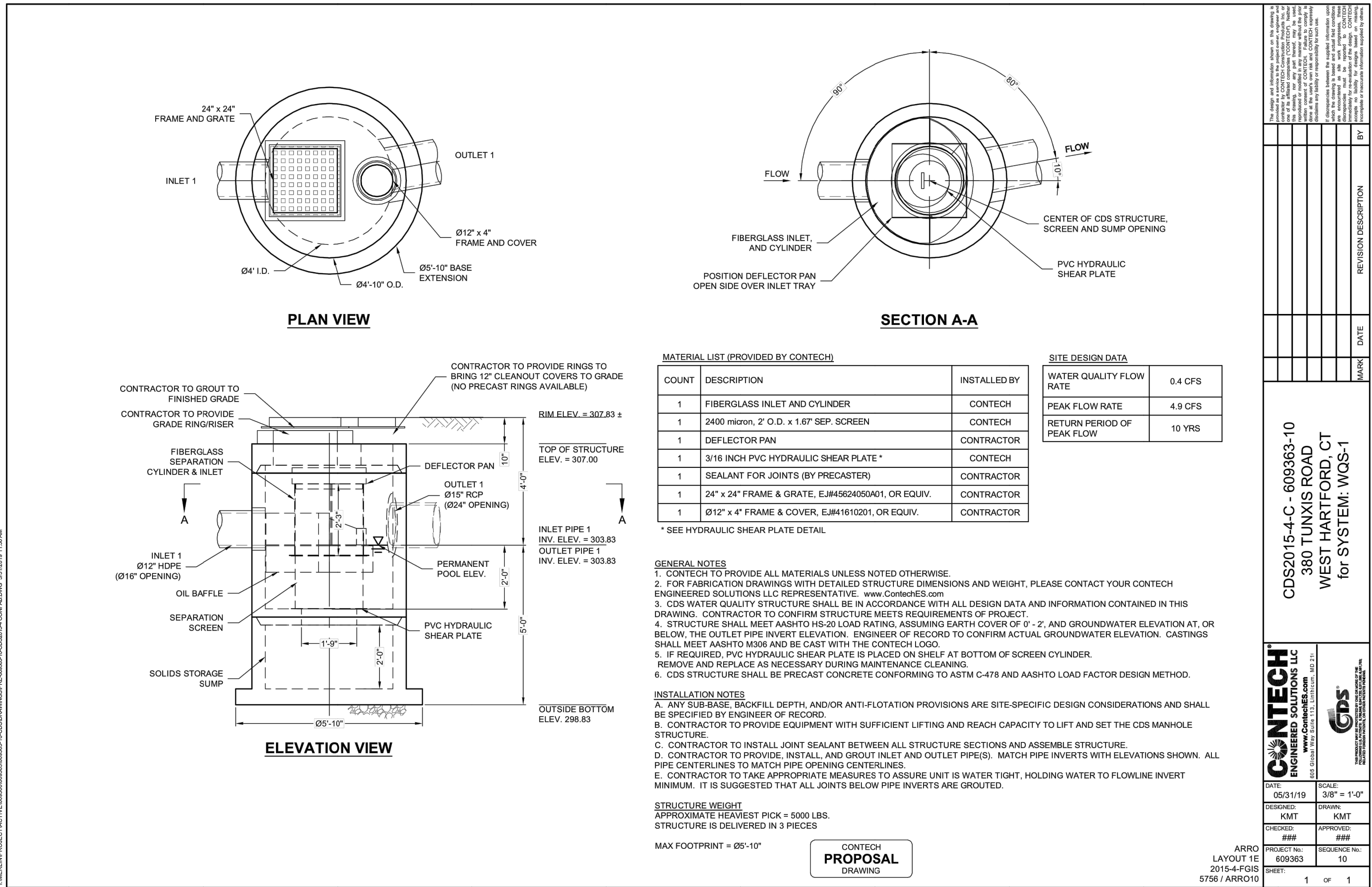


**MC-3500 INSPECTION PORT DETAIL**  
N.T.S.



- NOTES:**
- TURF REINFORCEMENT MAT SHALL BE T-RECS (C), MANUFACTURED BY EAST COAST EROSION (610-488-8496). MATTING SHALL BE INSTALLED WITH STAPLES, AND MINIMUM REQUIRED OVERLAP PER MANUFACTURERS INSTALLATION GUIDELINES.

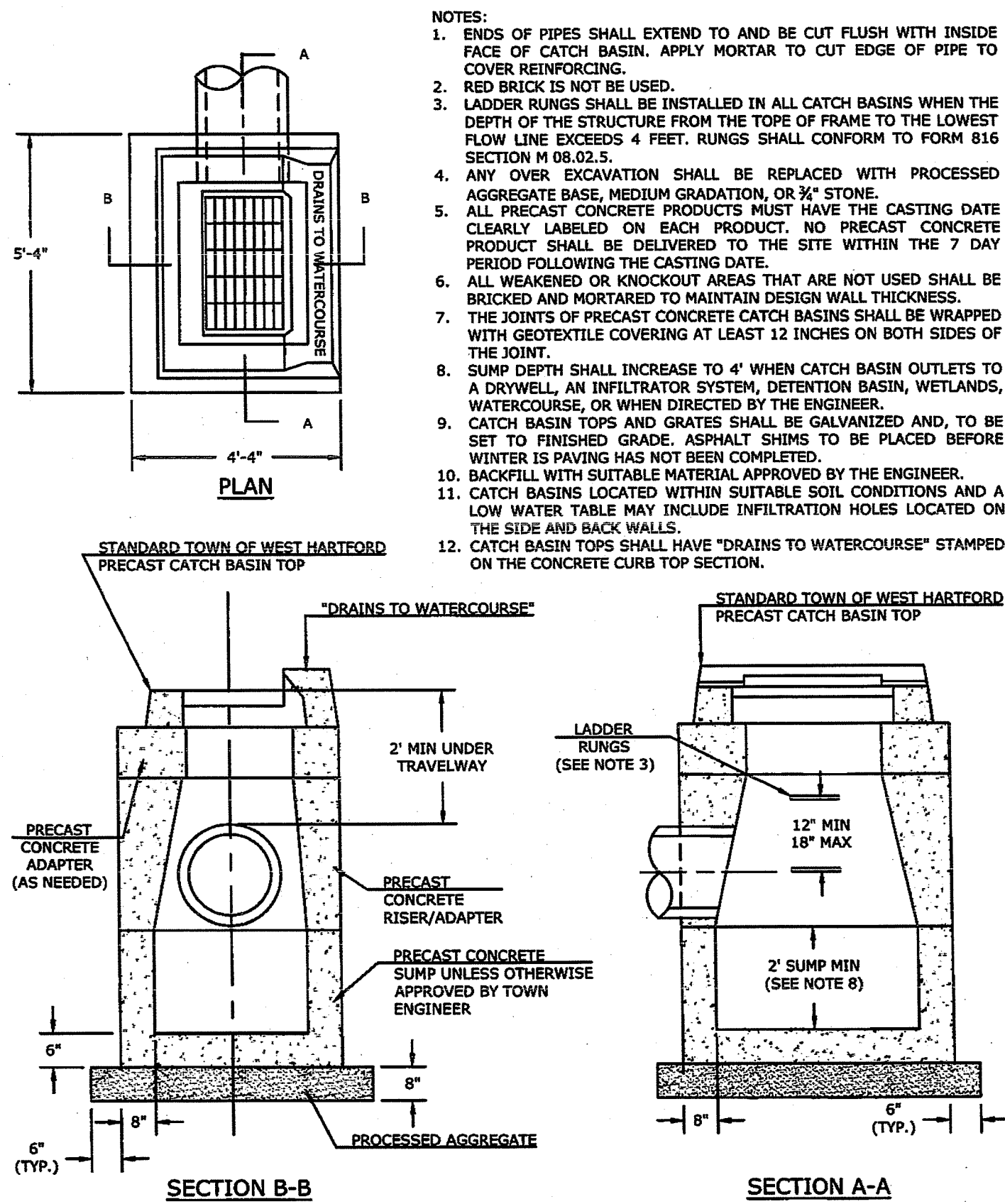
**LEVEL SPREADER**  
N.T.S.



- NOTES:**
- THIS DETAIL PERTAINS TO TEMPORARY AND FINAL PAYMENT RESTORATION.
  - UNLESS OTHERWISE APPROVED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE THE TEMPORARY ASPHALT, PLACE ASPHALT OVER THE TRENCH PERIMETER, AND JOINT SEAL THE TRENCH PERIMETER FOR THE FINAL RESTORATION.

**STREET EXCAVATION TRENCH RESTORATION DETAIL- DRAINAGE**

N.T.S.



- NOTES:**
- ENDS OF PIPES SHALL EXTEND TO AND BE CUT FLUSH WITH INSIDE FACE OF CATCH BASIN. APPLY MORTAR TO CUT EDGE OF PIPE TO COVER REINFORCING.
  - RED BRICK IS NOT TO BE USED.
  - LADDER RUNGS SHALL BE INSTALLED IN ALL CATCH BASINS WHEN THE DEPTH OF THE STRUCTURE FROM THE TOP OF FRAME TO THE LOWEST FLOW LINE EXCEEDS 4 FEET. RUNGS SHALL CONFORM TO FORM 816 SECTION M 08.02.5.
  - ANY OVER EXCAVATION SHALL BE REPLACED WITH PROCESSED AGGREGATE BASE, MEDIUM GRADATION, OR 3/4" STONE.
  - ALL PRECAST CONCRETE PRODUCTS MUST HAVE THE CASTING DATE CLEARLY LABELED ON EACH PRODUCT. NO PRECAST CONCRETE PRODUCT SHALL BE DELIVERED TO THE SITE WITHIN THE 7 DAY PERIOD FOLLOWING THE CASTING DATE.
  - ALL WEAKENED OR KNOCKOUT AREAS THAT ARE NOT USED SHALL BE BRICKED AND MORTARED TO MAINTAIN DESIGN WALL THICKNESS.
  - THE JOINTS OF PRECAST CONCRETE CATCH BASINS SHALL BE WRAPPED WITH GEOTEXTILE COVERING AT LEAST 12 INCHES ON BOTH SIDES OF THE JOINT.
  - SUMP DEPTH SHALL INCREASE TO 4' WHEN CATCH BASIN OUTLETS TO A DRYWELL, AN INFILTRATOR SYSTEM, DETENTION BASIN, WETLANDS, WATERCOURSE, OR WHEN DIRECTED BY THE ENGINEER.
  - CATCH BASIN TOPS AND GRATES SHALL BE GALVANIZED AND, TO BE SET TO FINISHED GRADE. ASPHALT SHIMS TO BE PLACED BEFORE WINTER IS PAVING HAS NOT BEEN COMPLETED.
  - BACKFILL WITH SUITABLE MATERIAL APPROVED BY THE ENGINEER.
  - CATCH BASINS LOCATED WITHIN SUITABLE SOIL CONDITIONS AND A LOW WATER TABLE MAY INCLUDE INFILTRATION HOLES LOCATED ON THE SIDE AND BACK WALLS.
  - CATCH BASIN TOPS SHALL HAVE "DRAINS TO WATERCOURSE" STAMPED ON THE CONCRETE CURB TOP SECTION.

**PRECAST CONCRETE CATCH BASIN DETAIL**

N.T.S.

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**ORCHARD HEIGHTS DEVELOPERS LLC**  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

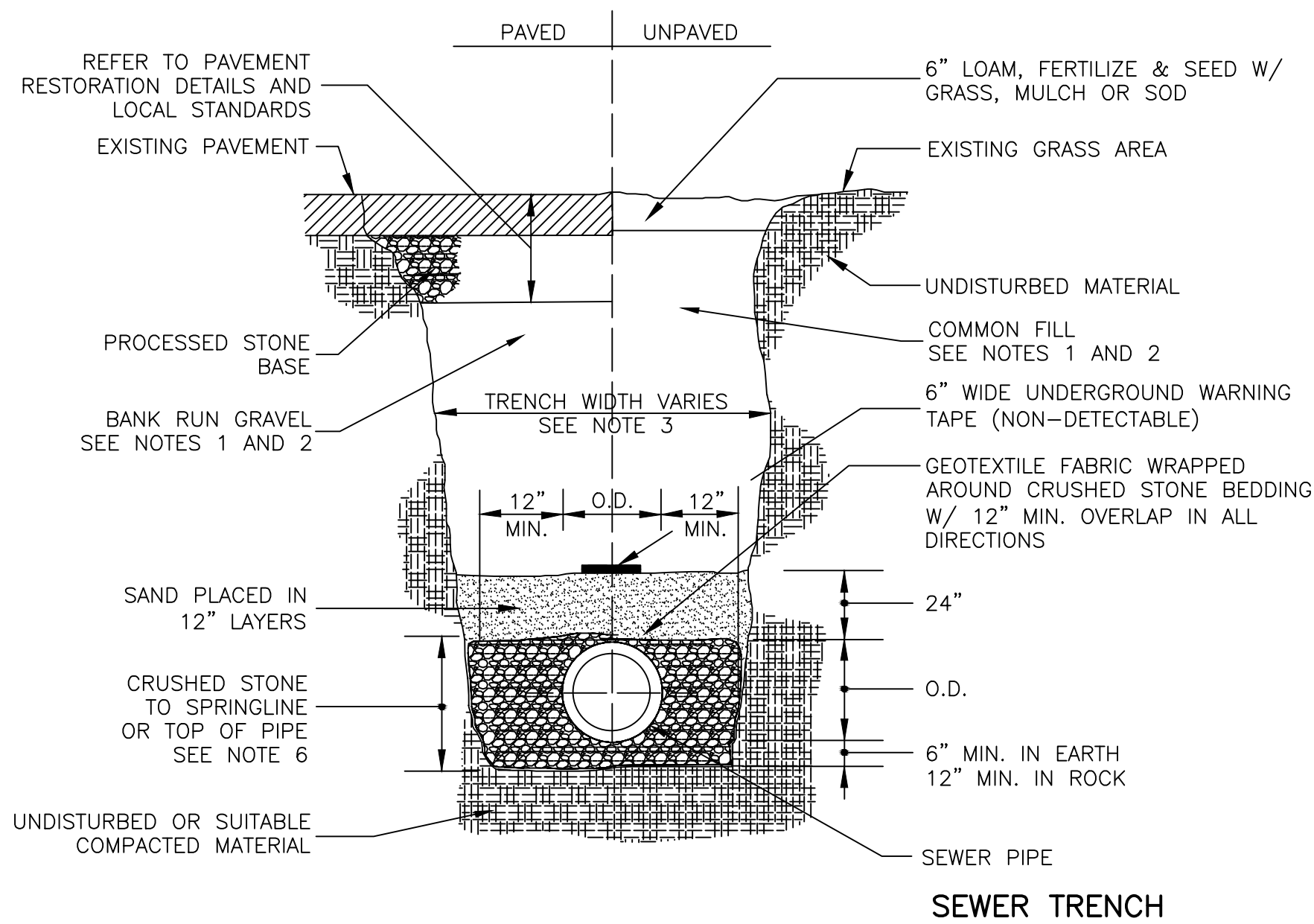
STORMWATER  
DETAILS

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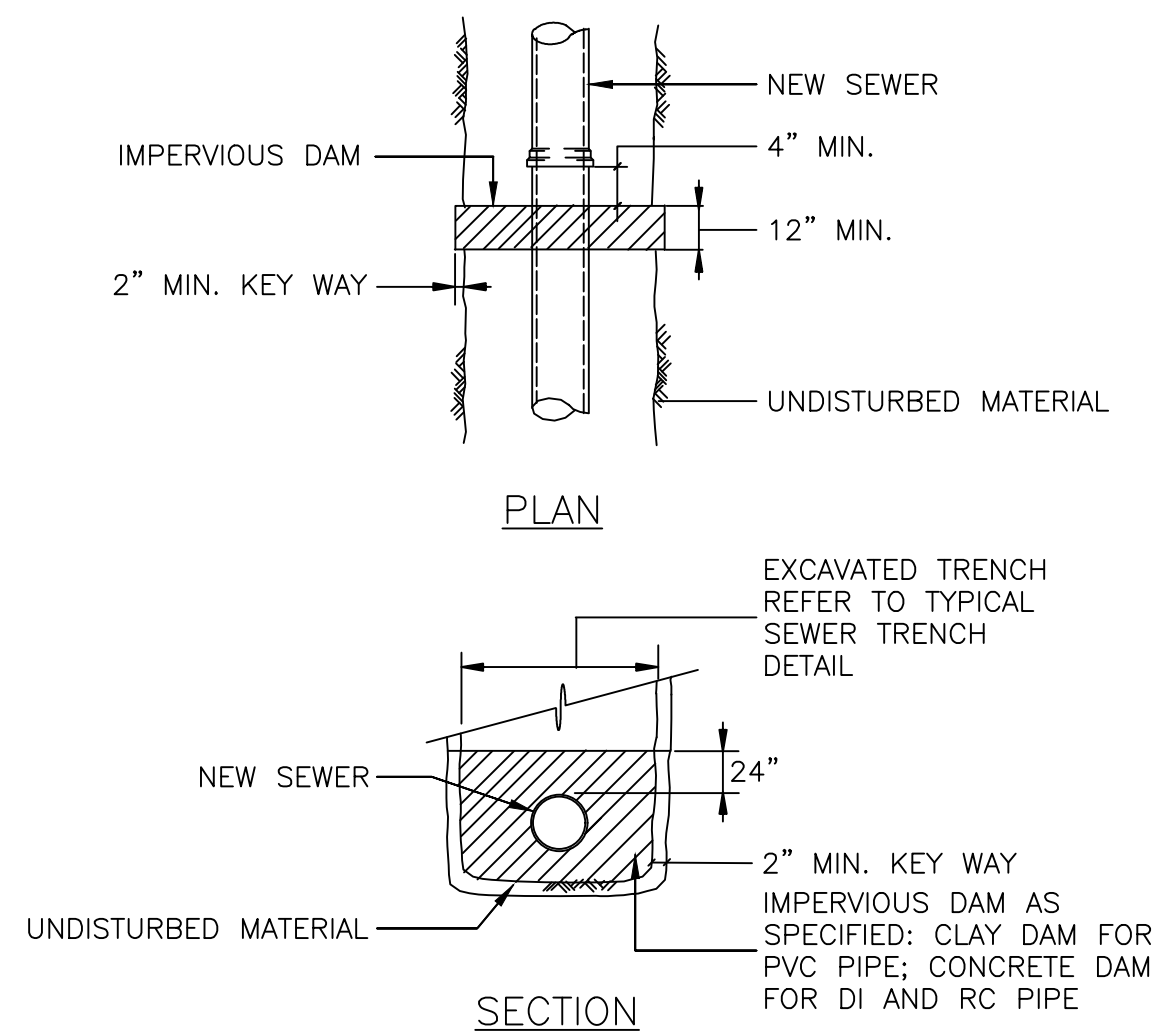




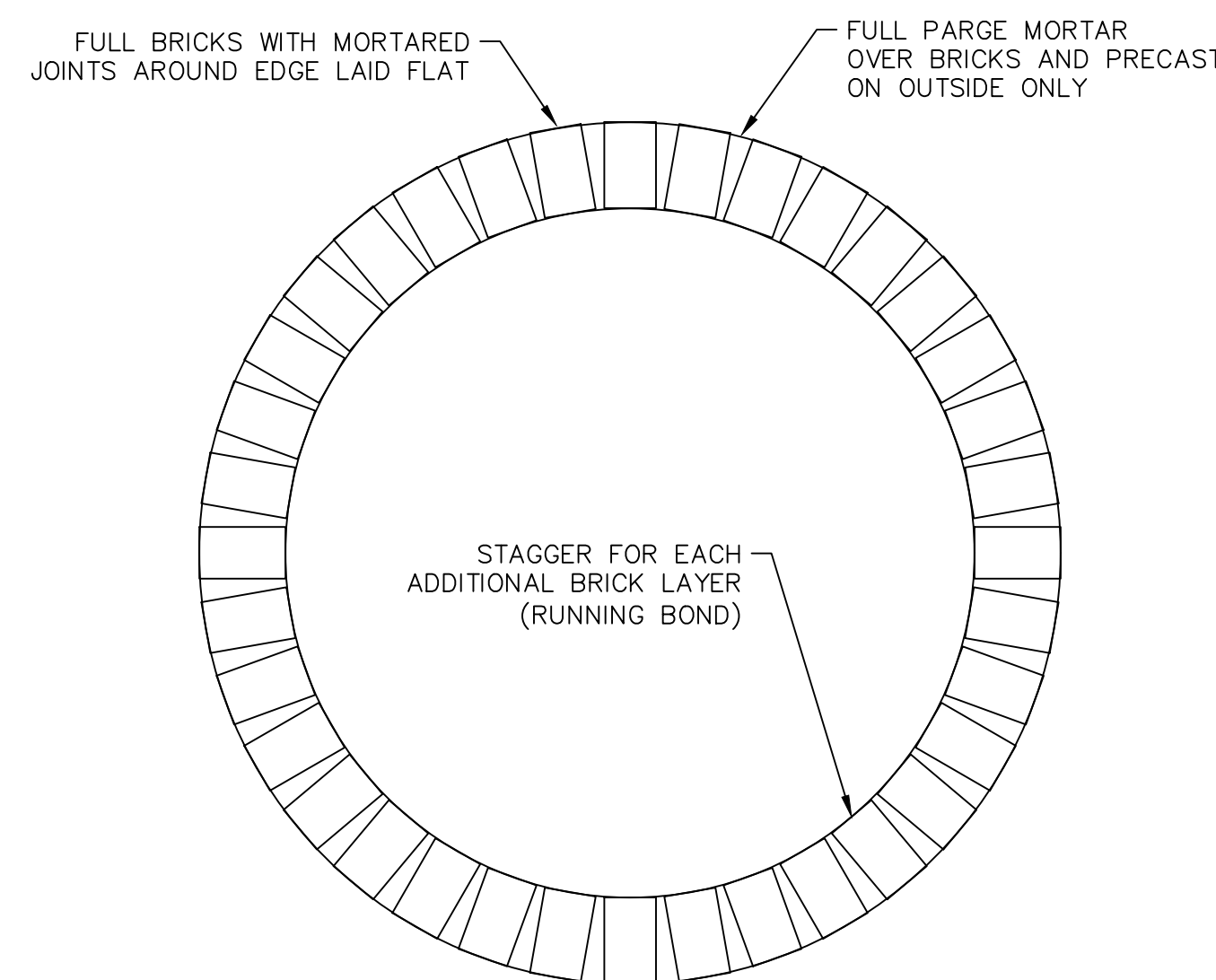
#### NOTES:

1. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED.
2. BACKFILL MATERIAL SHALL BE APPROVED BANK RUN GRAVEL IN PAVED AREAS (INCLUDING DRIVEWAYS AND SIDEWALKS) OR COMMON FILL IN UNPAVED AREAS.
3. TRENCH WIDTH VARIES BASED ON PIPE SIZE AND DEPTH.
4. TRENCHES LOCATED IN THE ROAD SHOULDER SHALL BE TREATED THE SAME AS TRENCHES IN THE PAVED ROADWAY EXCEPT FOR PAVEMENT AND SURFACE RESTORATION WORK.
5. PROVIDE IMPERVIOUS TRENCH DAM(S) IN STONE BEDDING AS DIRECTED BY THE ENGINEER. SEE PIPE TRENCH DAM DETAIL.
6. CRUSHED STONE SHALL BE INSTALLED TO TOP OF PIPE FOR PVC AND DI PIPE AND TO SPRINGLINE FOR RC PIPE.

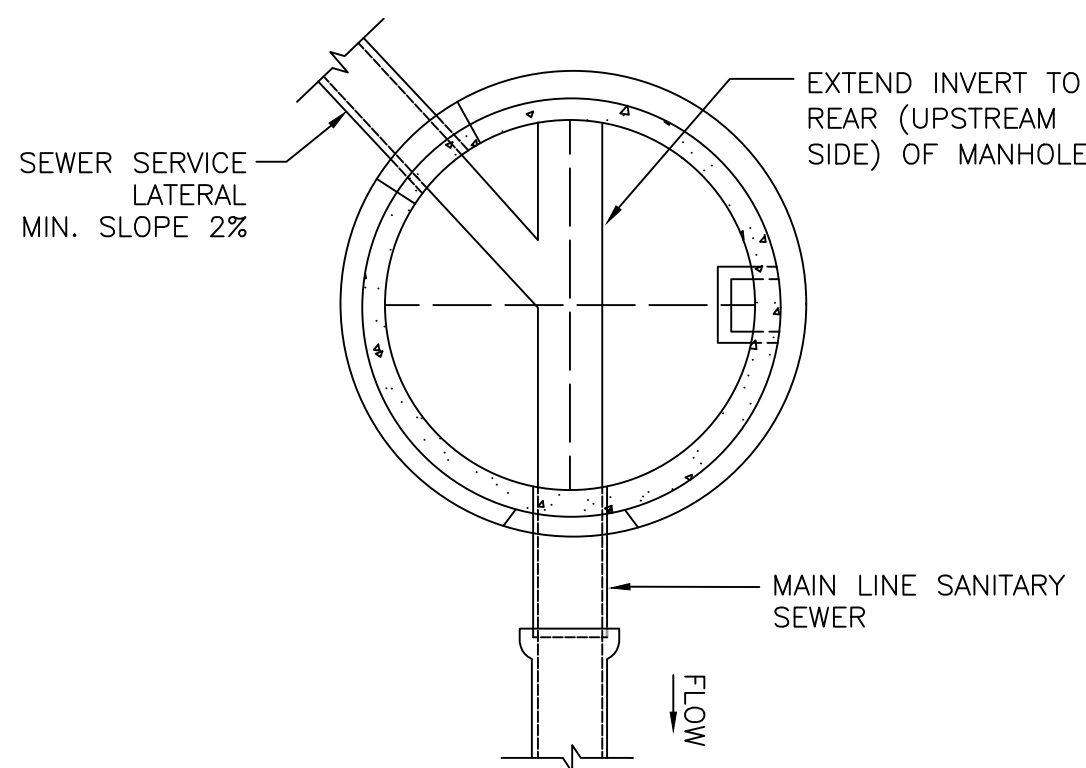
SEWER TRENCH



PIPE TRENCH DAM



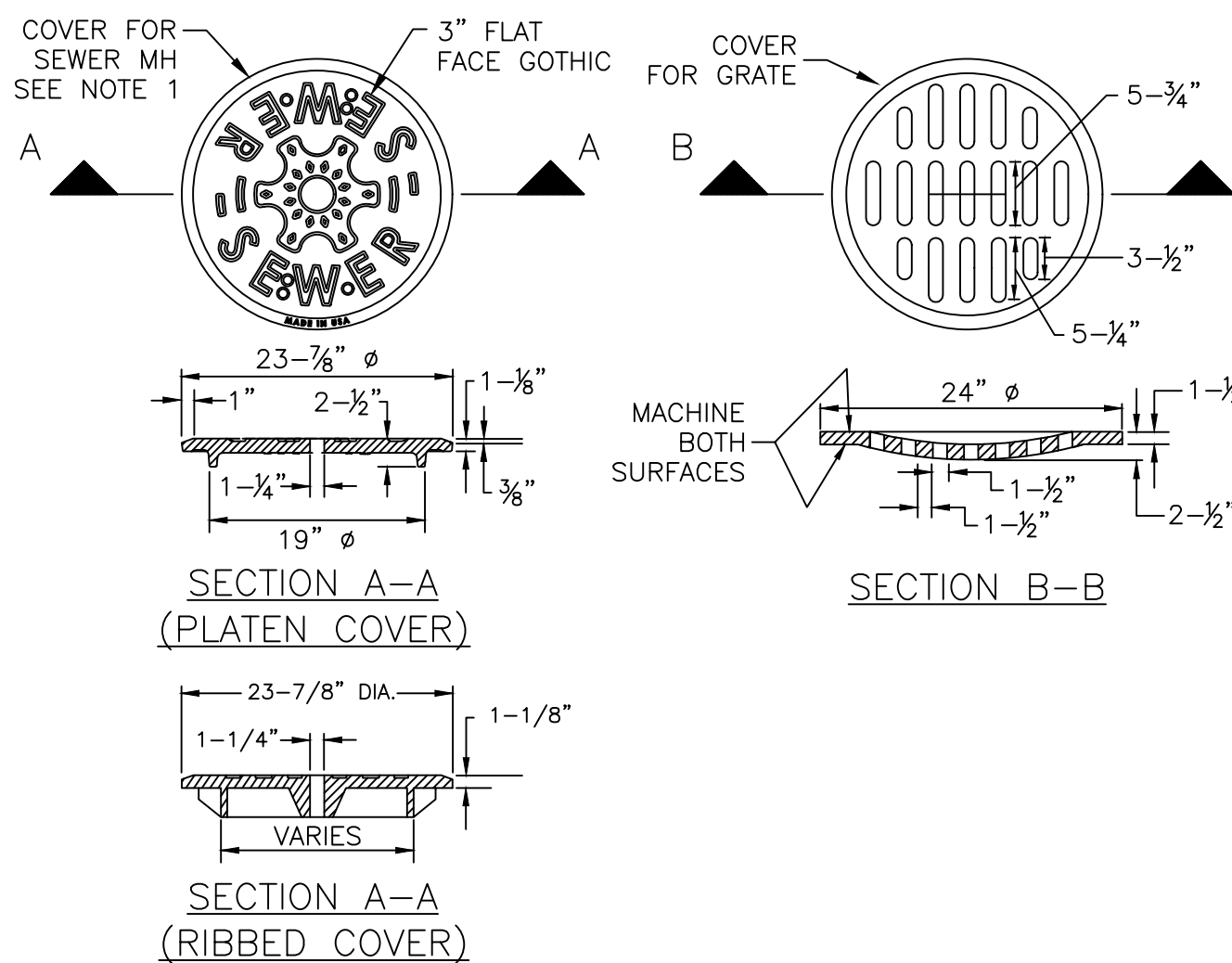
BRICK LEVELING COURSE FOR NEW MANHOLES



#### NOTE:

1. CONNECTION OF SEWER SERVICE LATERAL TO MANHOLE SHALL BE MADE WITH AN ELASTOMERIC TYPE OF SEAL.

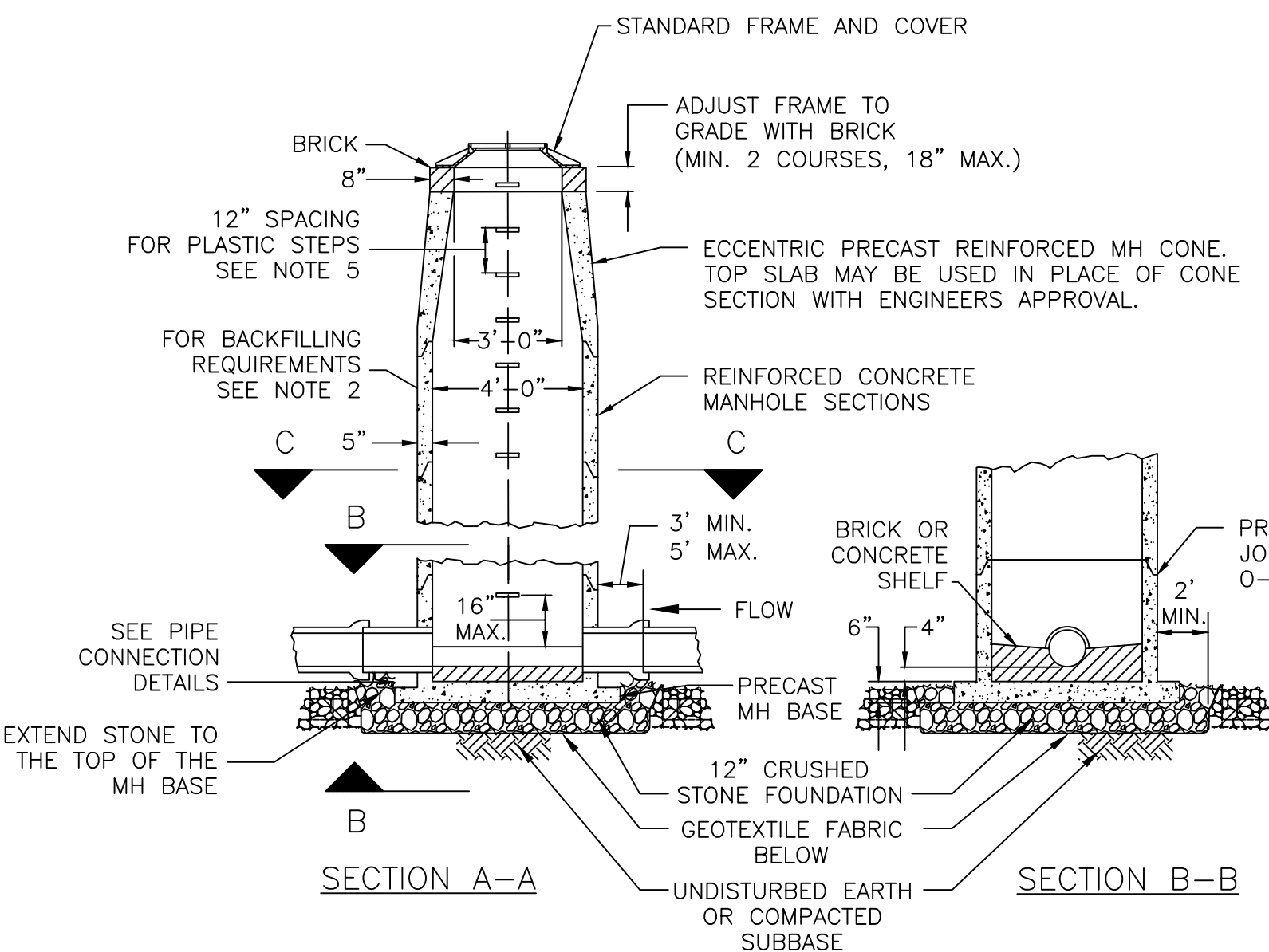
END MANHOLE



#### NOTES:

1. MANHOLES COVERS MAY BE DESIGN WITH OR WITHOUT RIBS. THE TOP SURFACE OF THE MANHOLE COVER SHALL BE FLAT. THE BOTTOM SURFACE MAY OR MAY NOT BE FLAT.
2. PROVIDE ALTERNATIVE INSCRIPTION 'STORM DRAIN' WHEN SPECIFIED.
3. THE LOWER SURFACE OF THE COVER AND THE CORRESPONDING UPPER SURFACE OF THE FRAME SHALL BE MACHINE FINISHED TO PROVIDE A SMOOTH FLAT CONTACT OR FIT WITHOUT ANY TENDENCY FOR THE COVER OR GRATE TO ROCK OR RATTLE. THE GAP BETWEEN THE COVER/GRATE AND FRAME SHALL BE NO MORE THAN 1/8\"/>

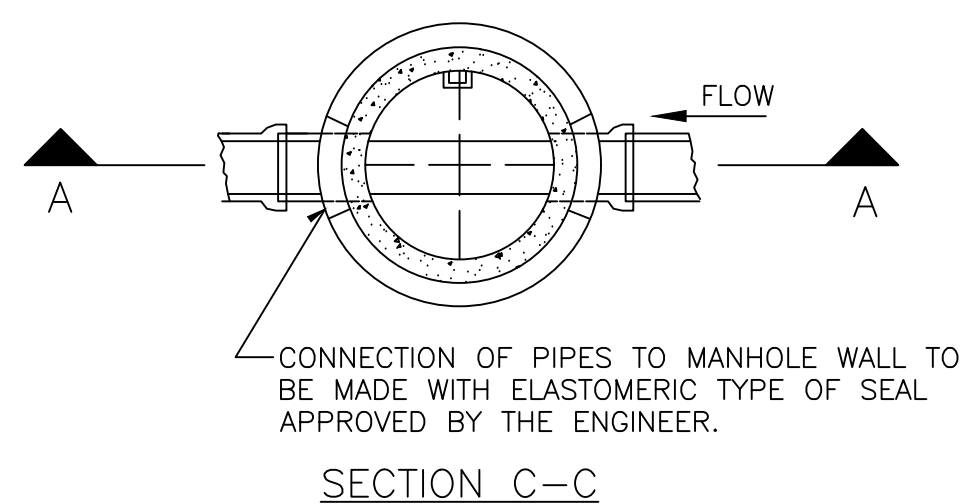
STANDARD MANHOLE COVERS



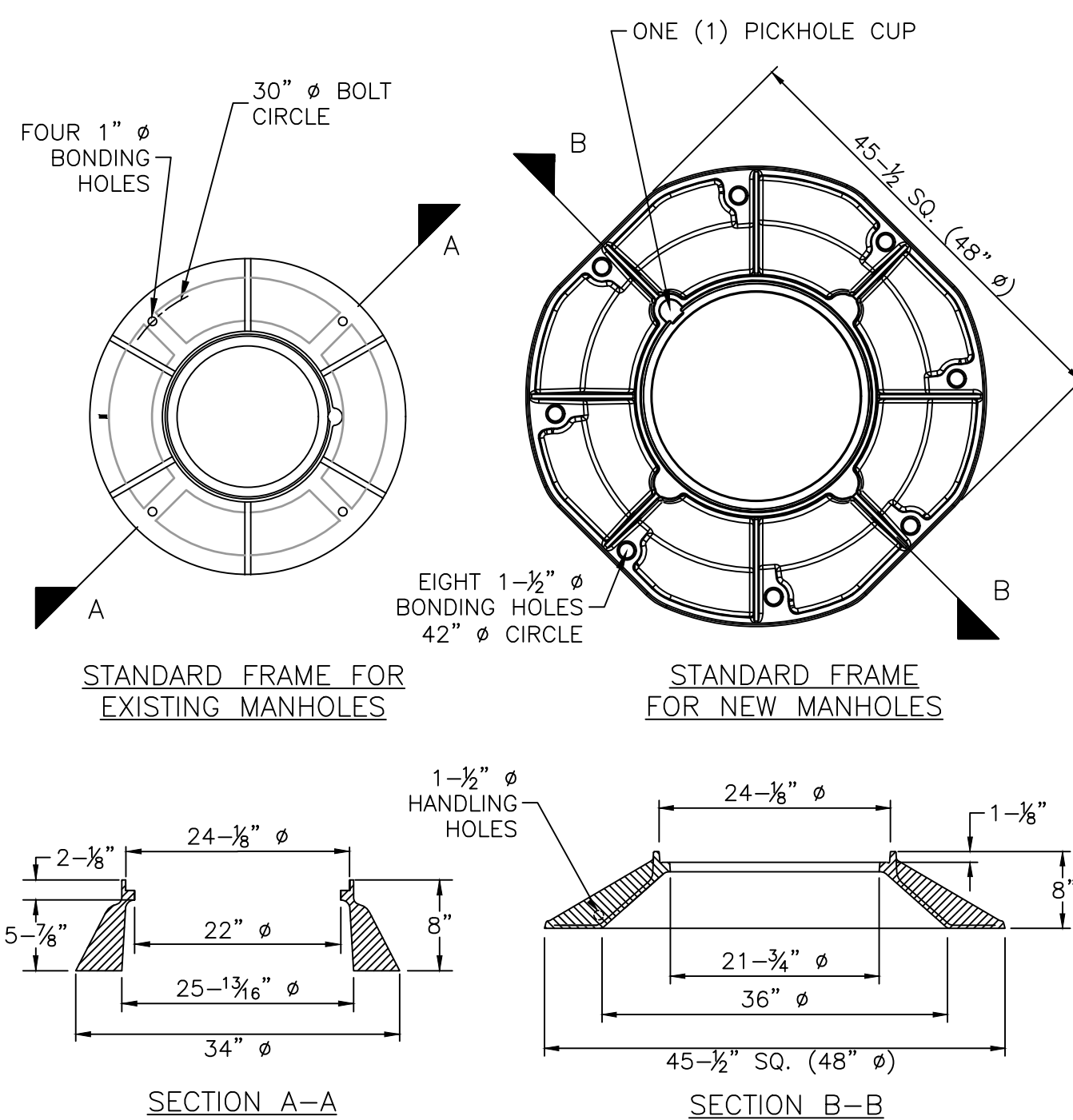
TYPE II PRECAST CONCRETE MANHOLE

#### NOTES:

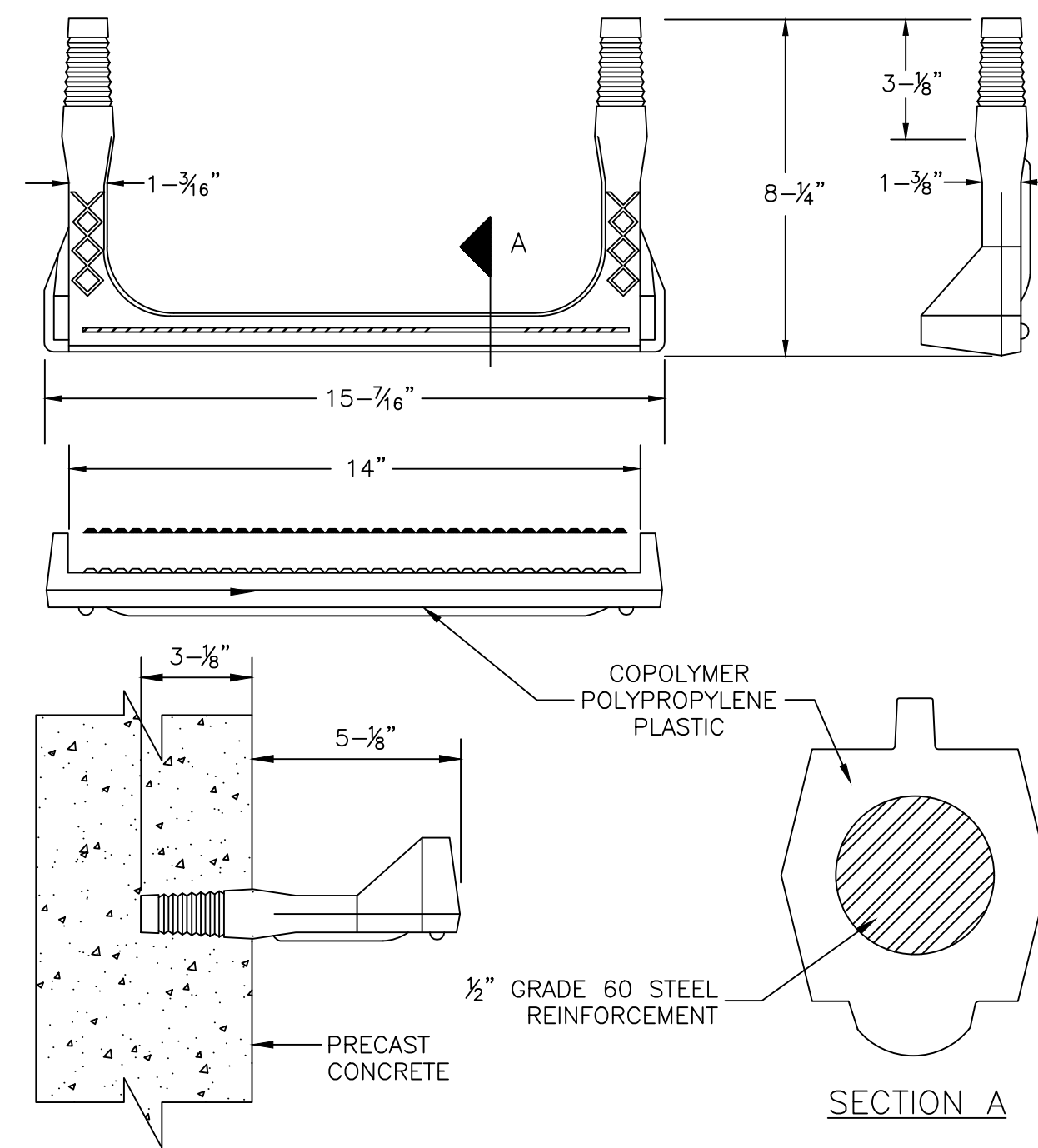
1. MAXIMUM PIPE SIZE TO BE INSTALLED IN 48\"/>



SECTION C-C

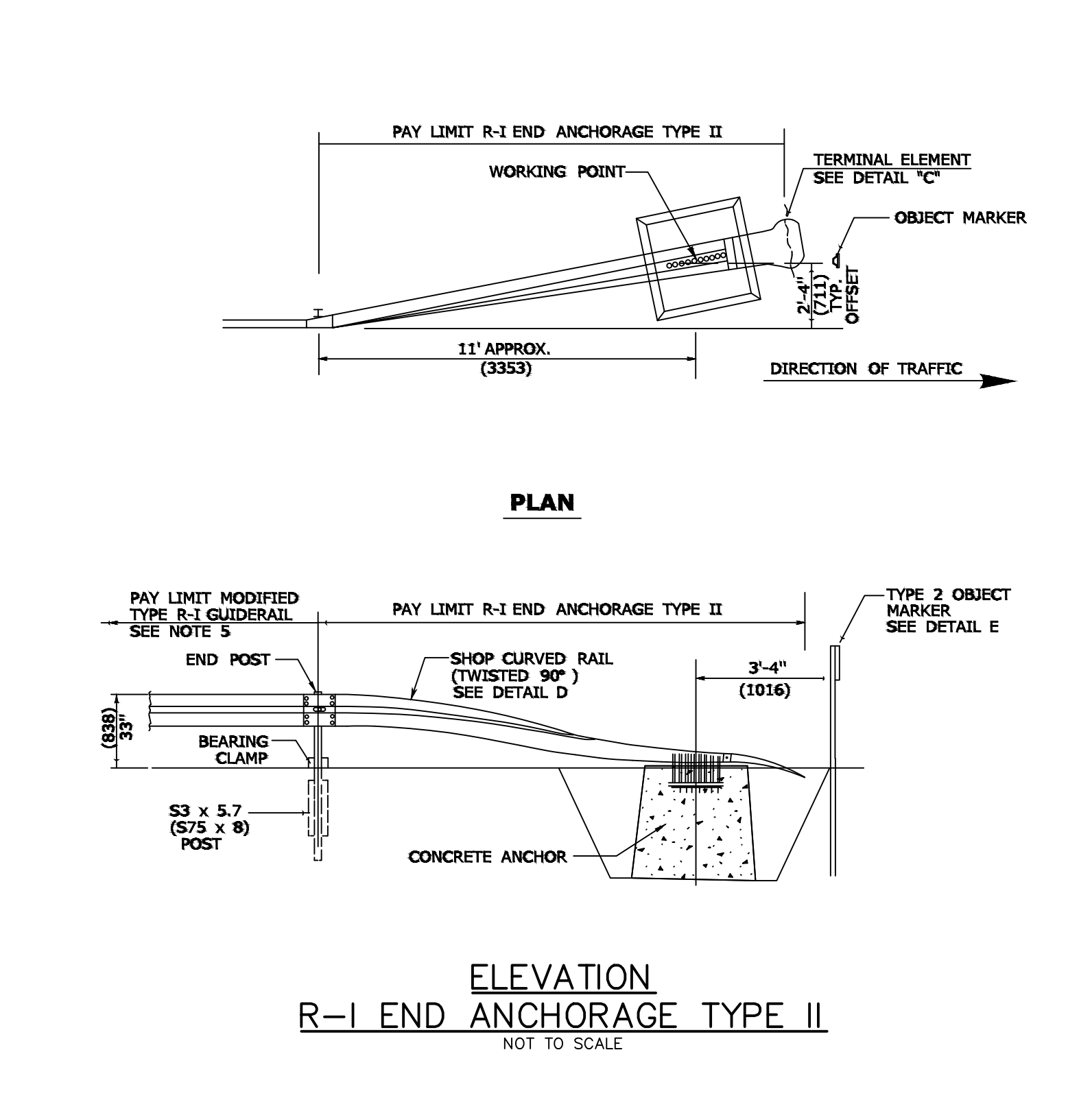
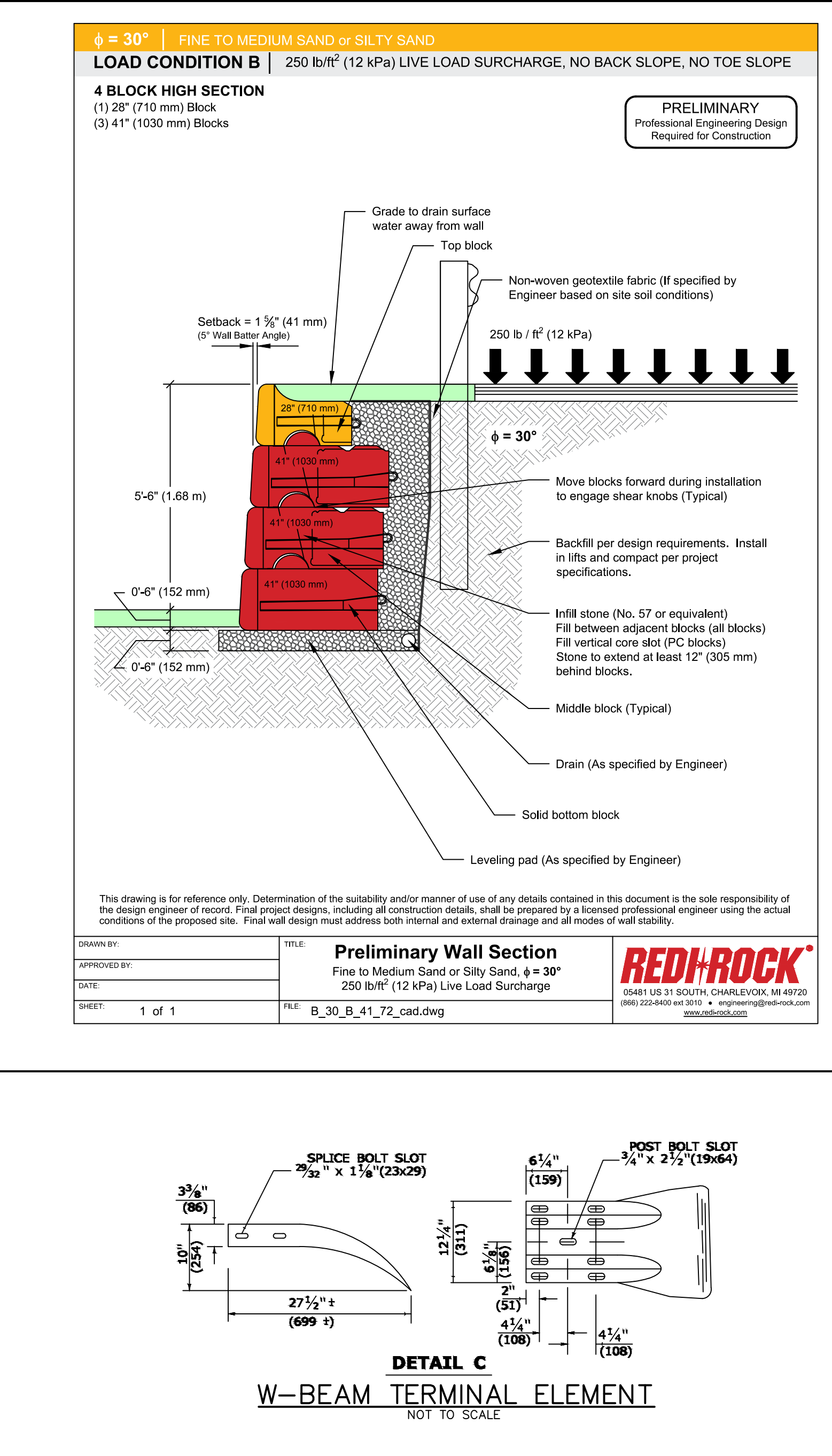
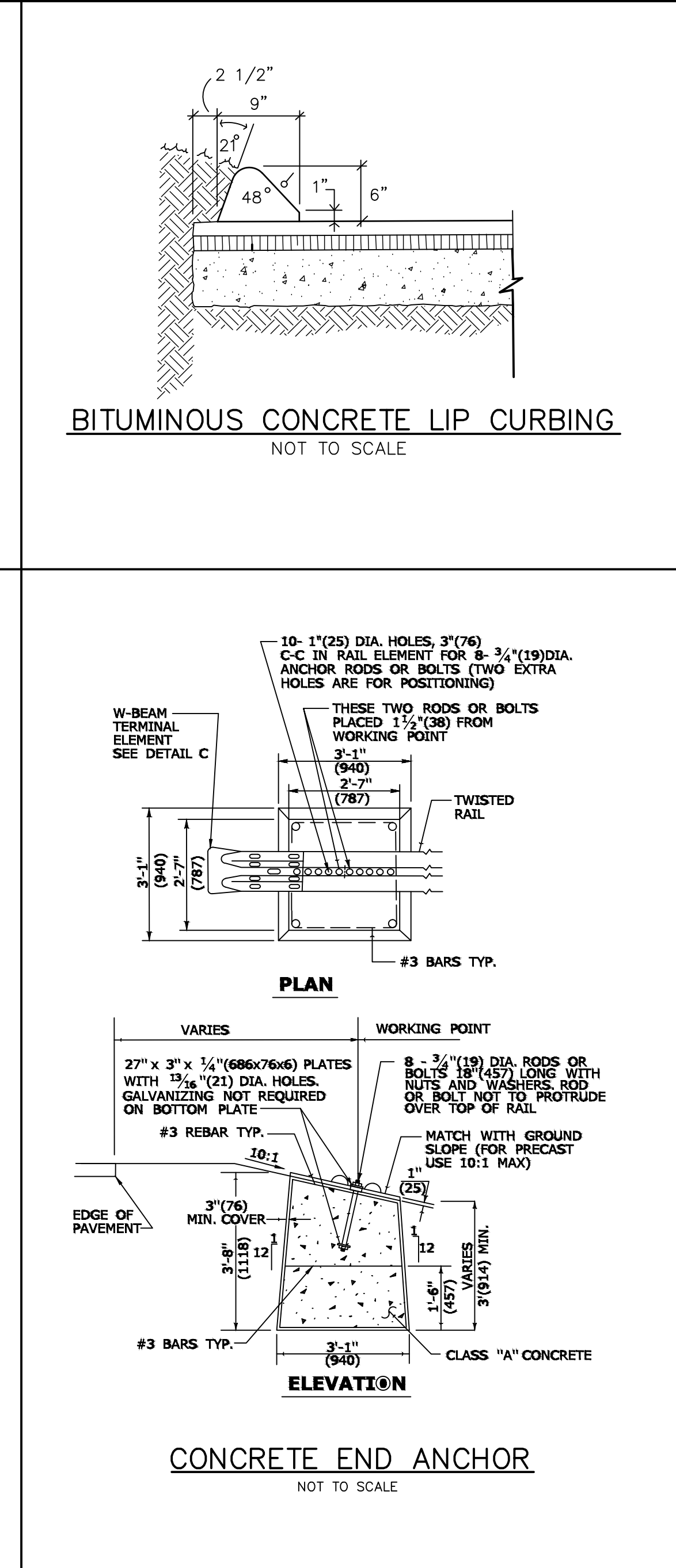
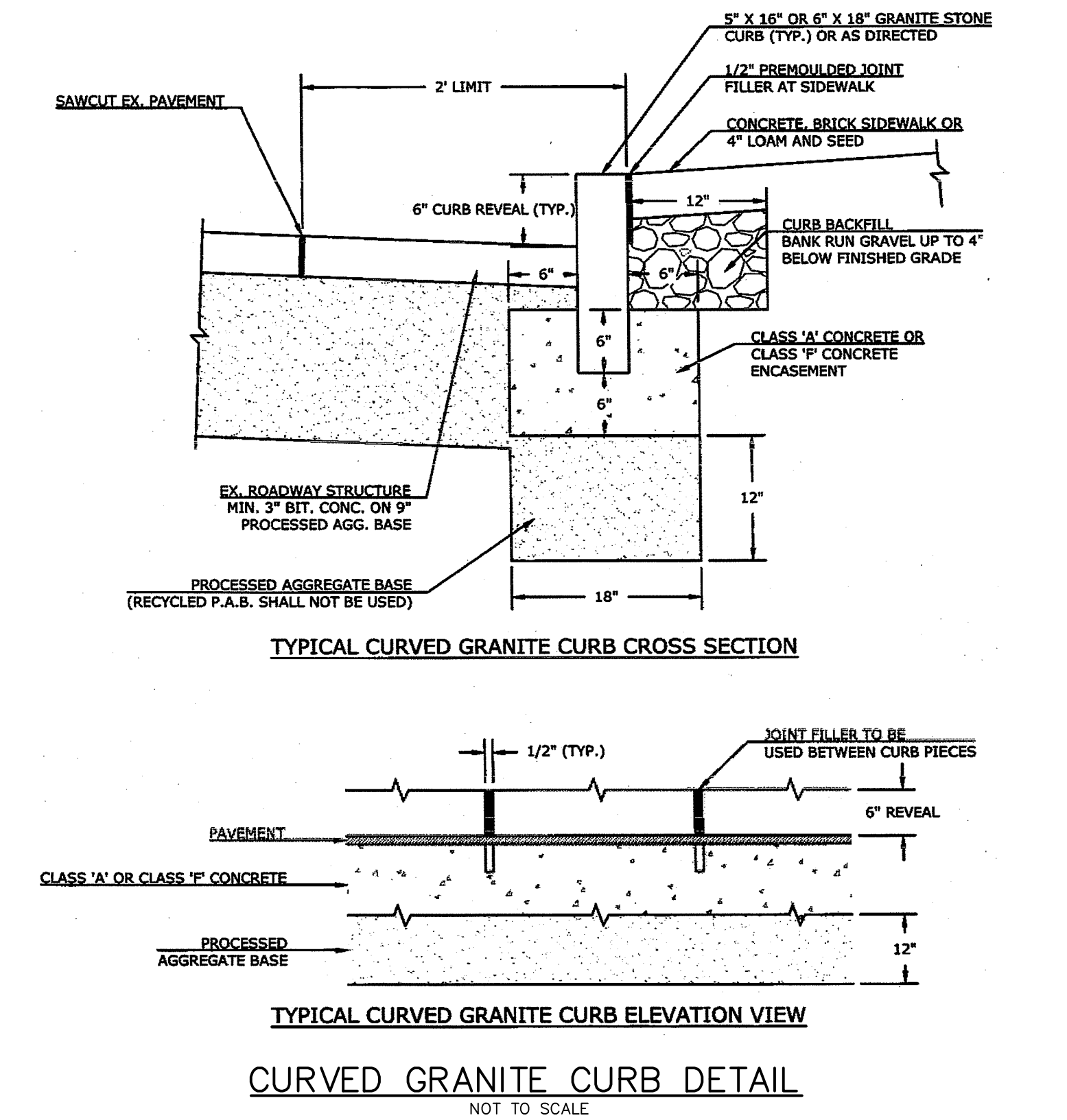
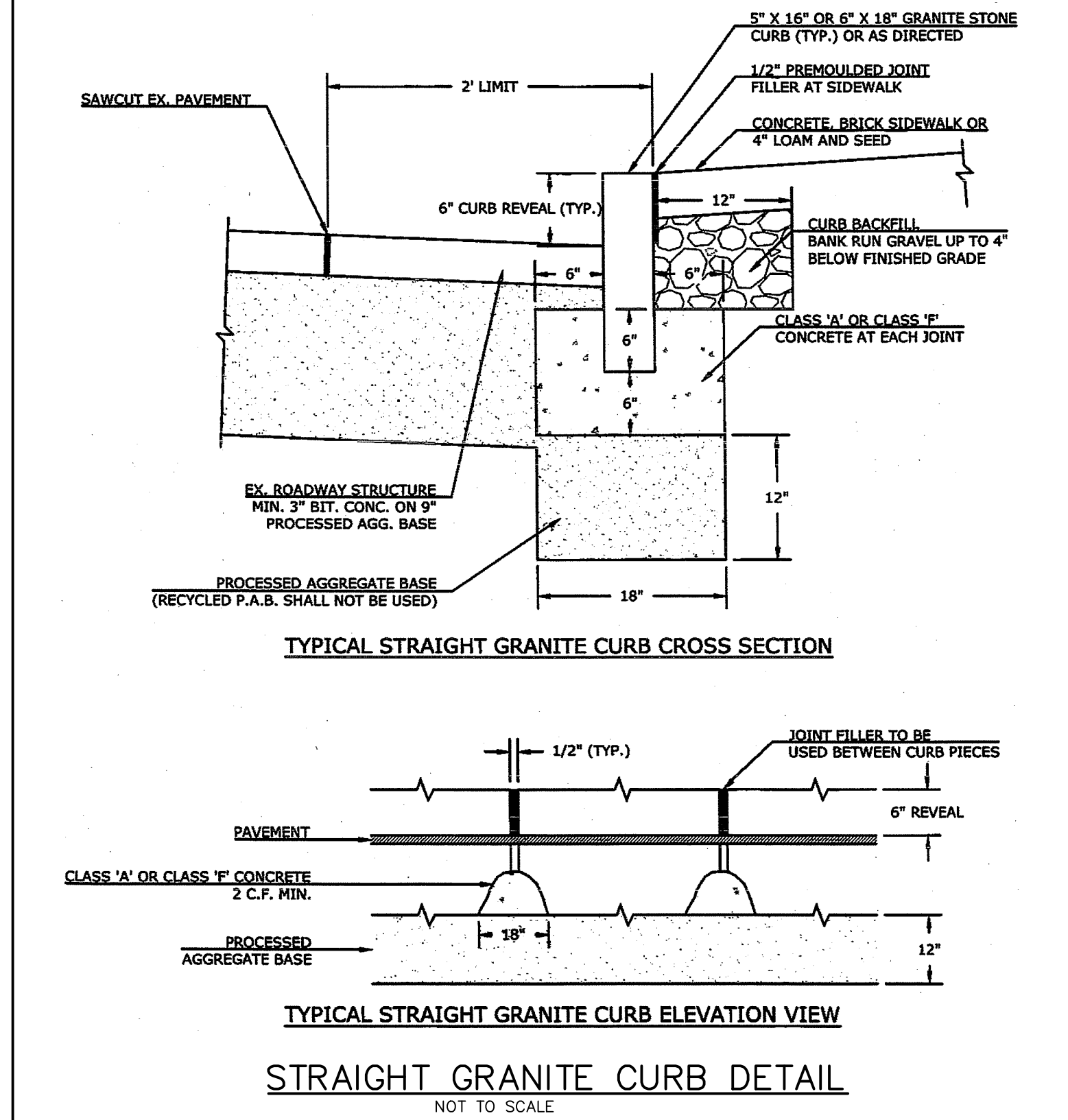
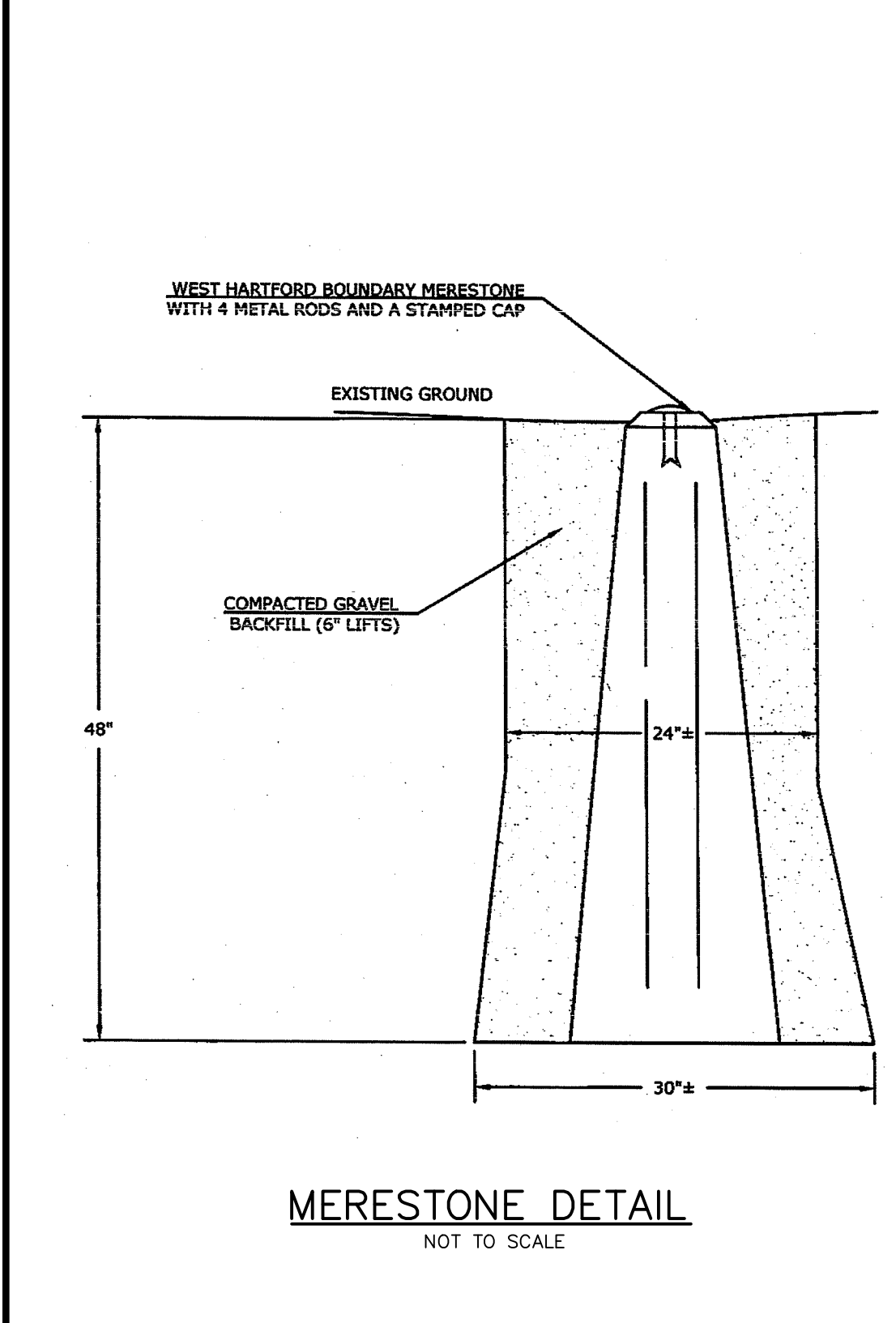
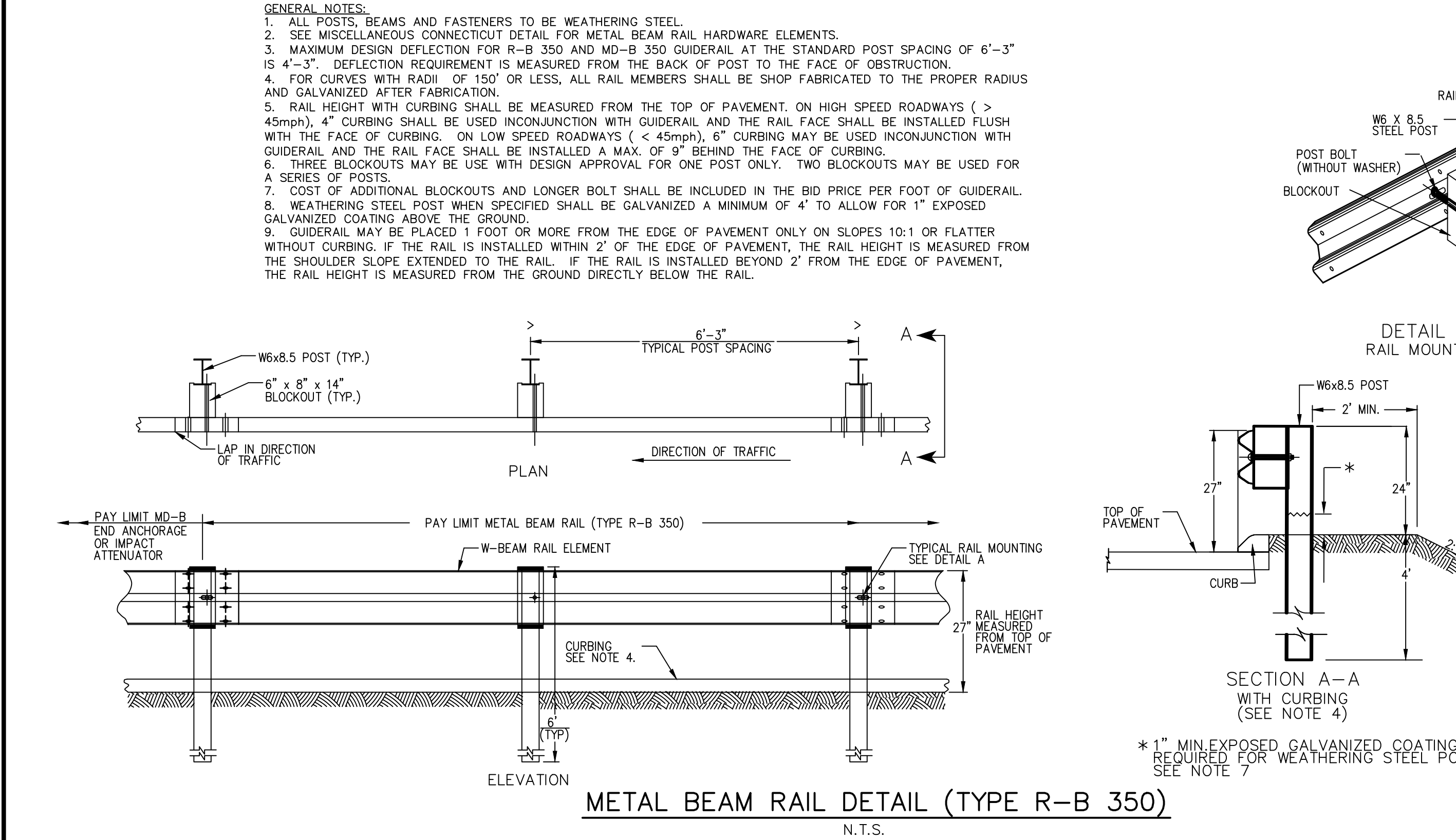
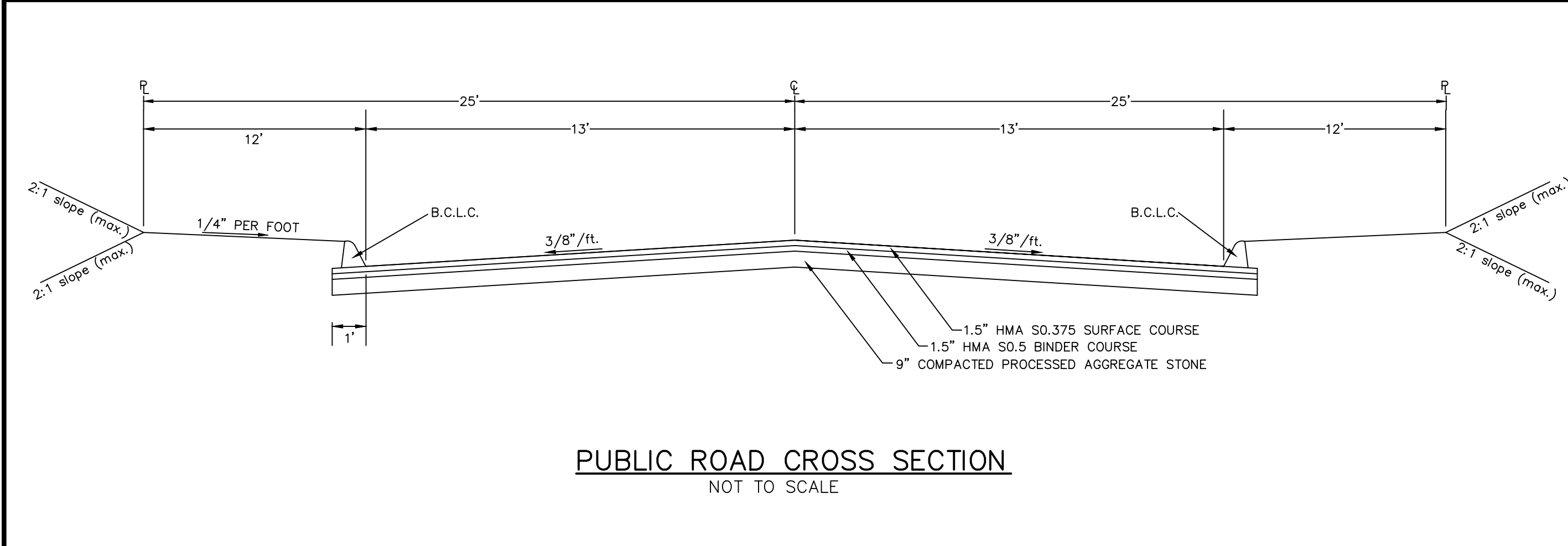


STANDARD MANHOLE FRAMES



PLASTIC STEP FOR PRECAST CONCRETE MANHOLE





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860.513.4723  
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THE BONGIOVANNI GROUP, INC.  
LAND SURVEYORS  
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Newington, Conn. 06111  
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Scale: AS SHOWN  
Checked: AB  
Date: 1-18-19  
Drawn: BTM

Revision

TOWN COMMENTS

TOWN COMMENTS

RESURVEY PREPARED FOR

ORCHARD HEIGHTS DEVELOPERS LLC

380 TUNXIS ROAD

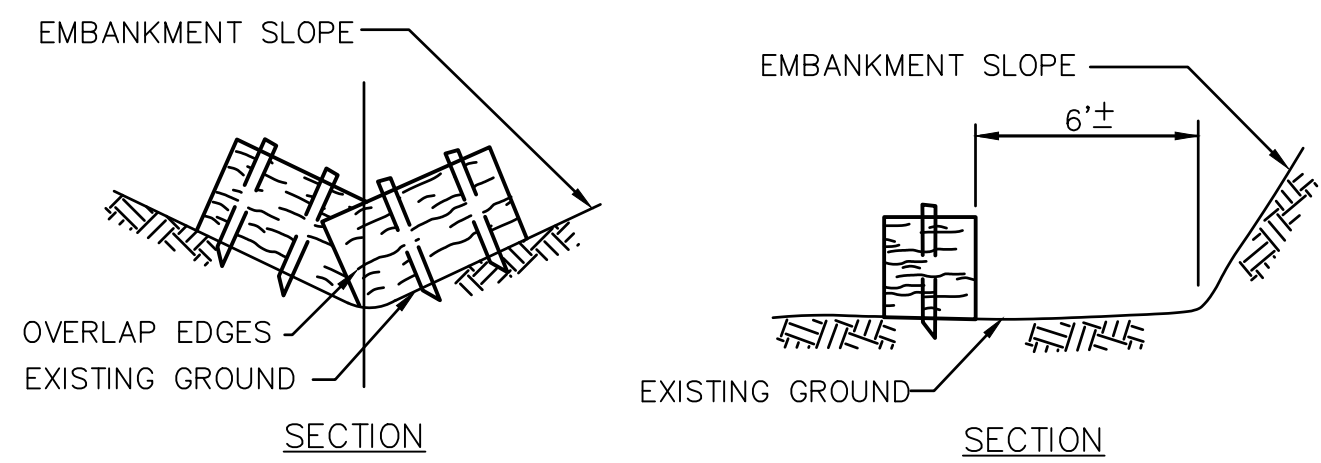
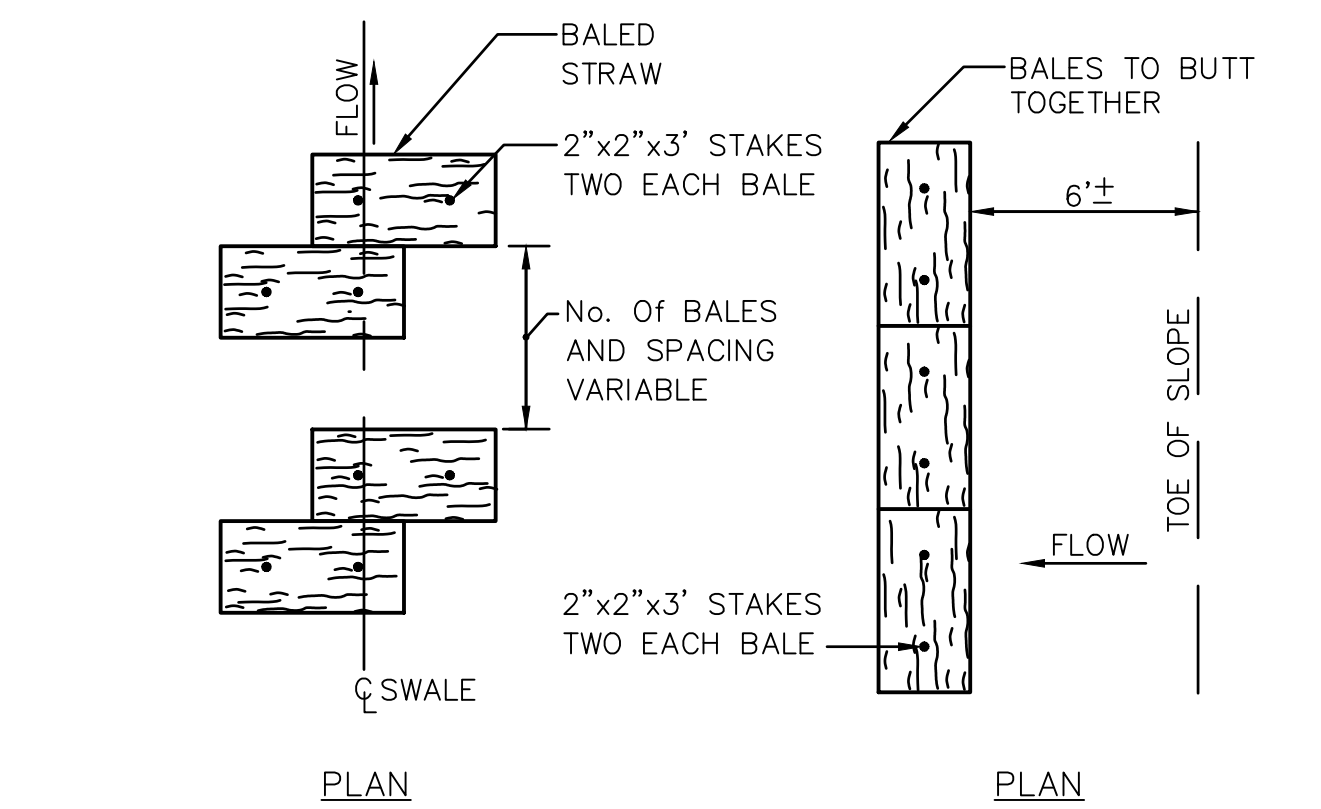
WEST HARTFORD, CONNECTICUT

SITE DETAILS

Sheet 1416 of

87306

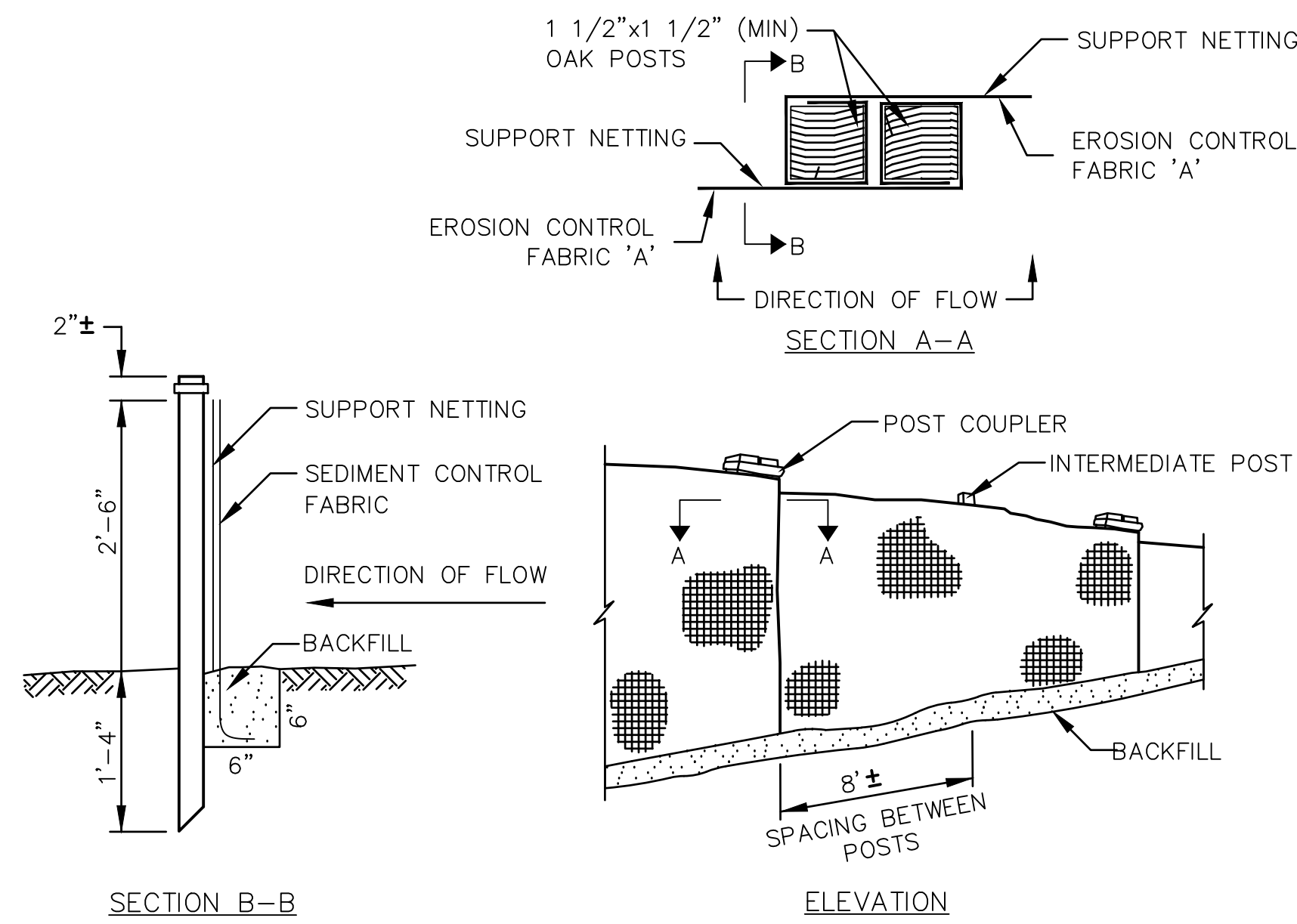




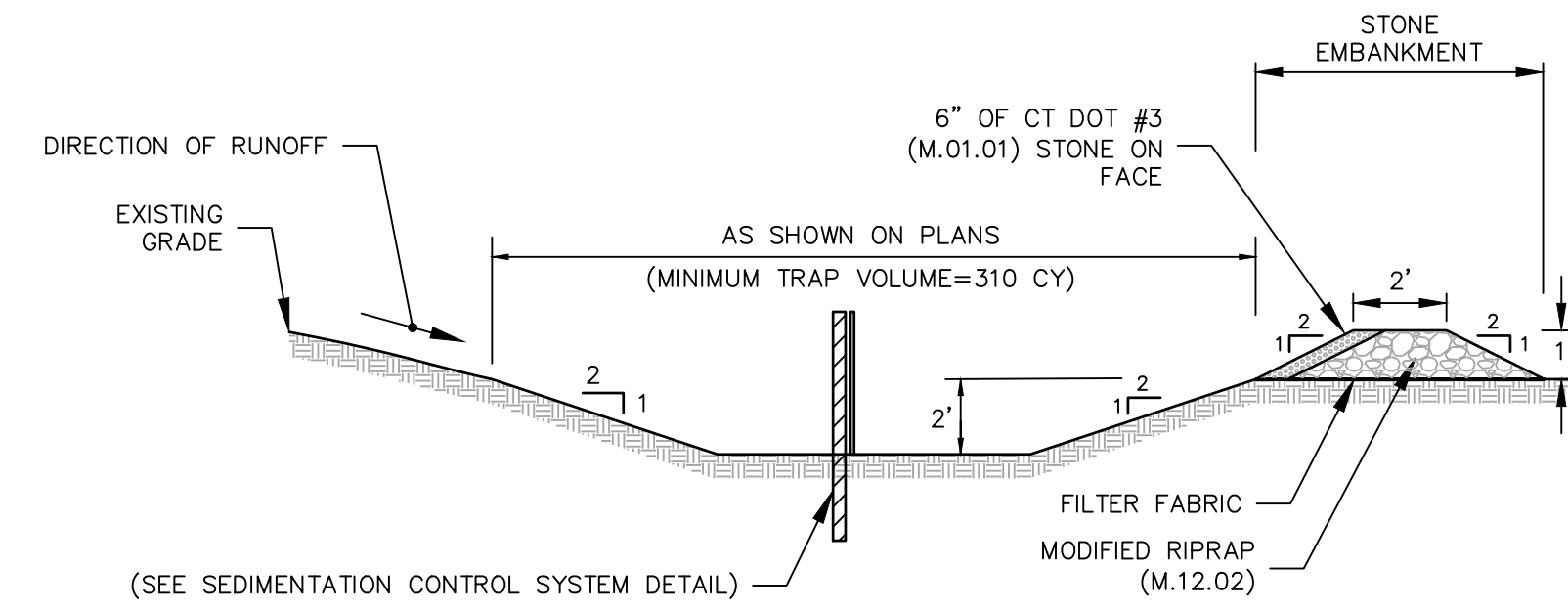
NOTE: TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES IN TOWARD THE TOE OF SLOPE

NOTE: TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES AWAY FROM THE TOE OF SLOPE

STRAW BALE DETAIL  
N.T.S.

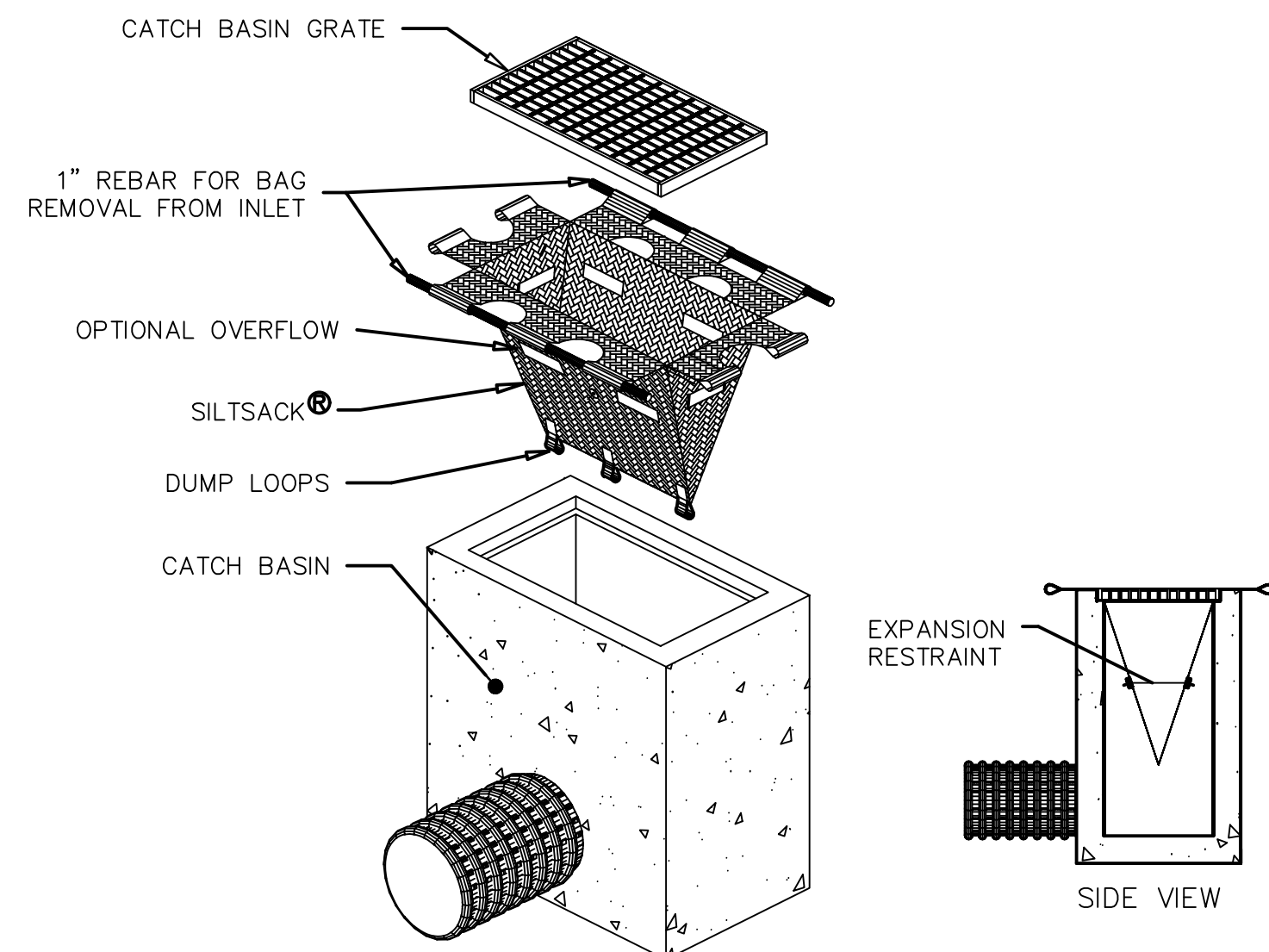


SILT FENCE DETAIL  
N.T.S.

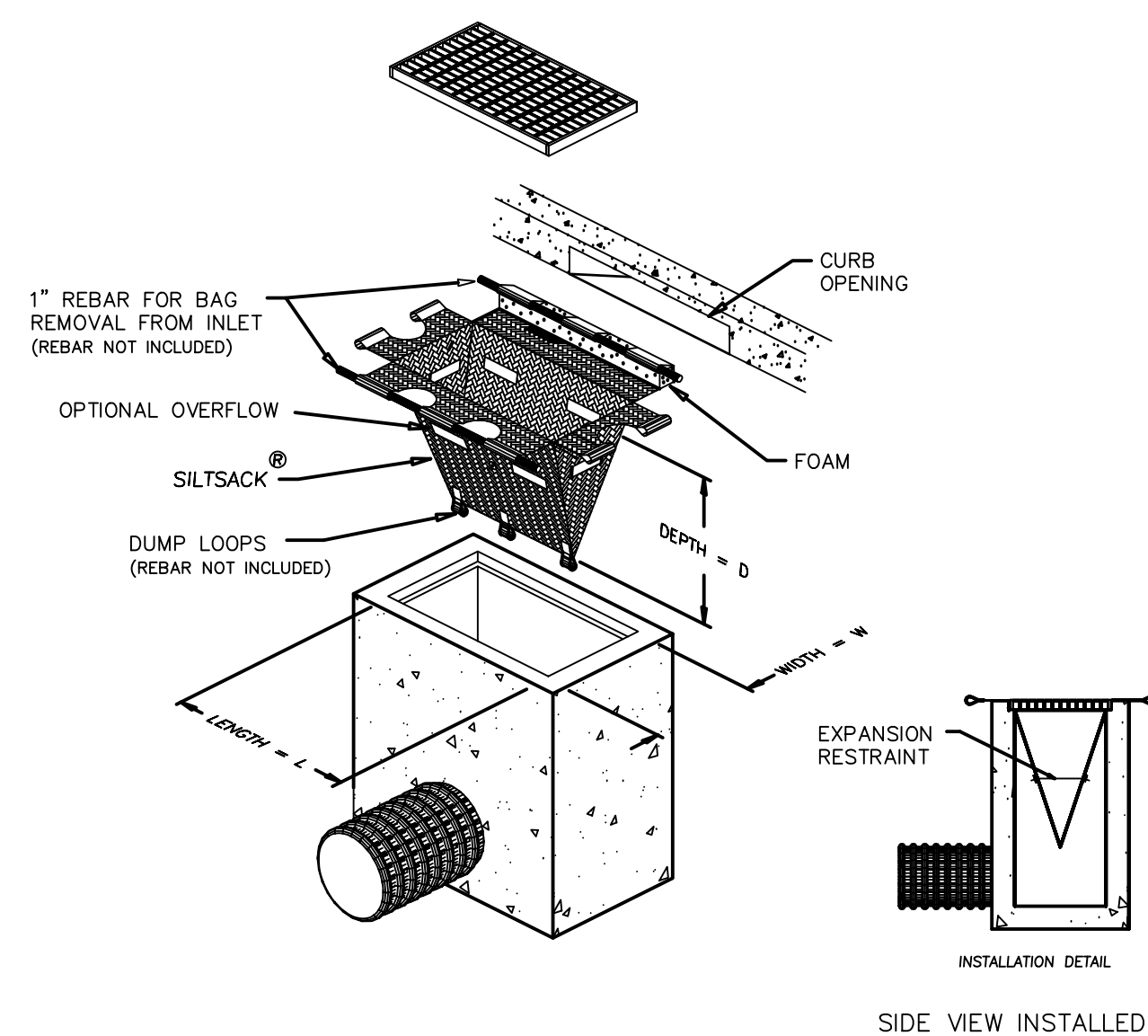


- NOTE:
1. THE CONTRACTOR SHALL ENLARGE TRAP, AT NO ADDITIONAL COST TO THE OWNER, AS REQUIRED TO ALLOW FOR PROPER FUNCTION OF THE BASIN
  2. ALTERNATE SEDIMENTATION TRAPS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.
  3. TRAPS SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF ANY STORM OF 0.5 IN OR GREATER.
  4. SEDIMENT EXCEEDING 1/2 THE DEPTH BELOW THE STONE EMBANKMENTS SHALL BE REMOVED.

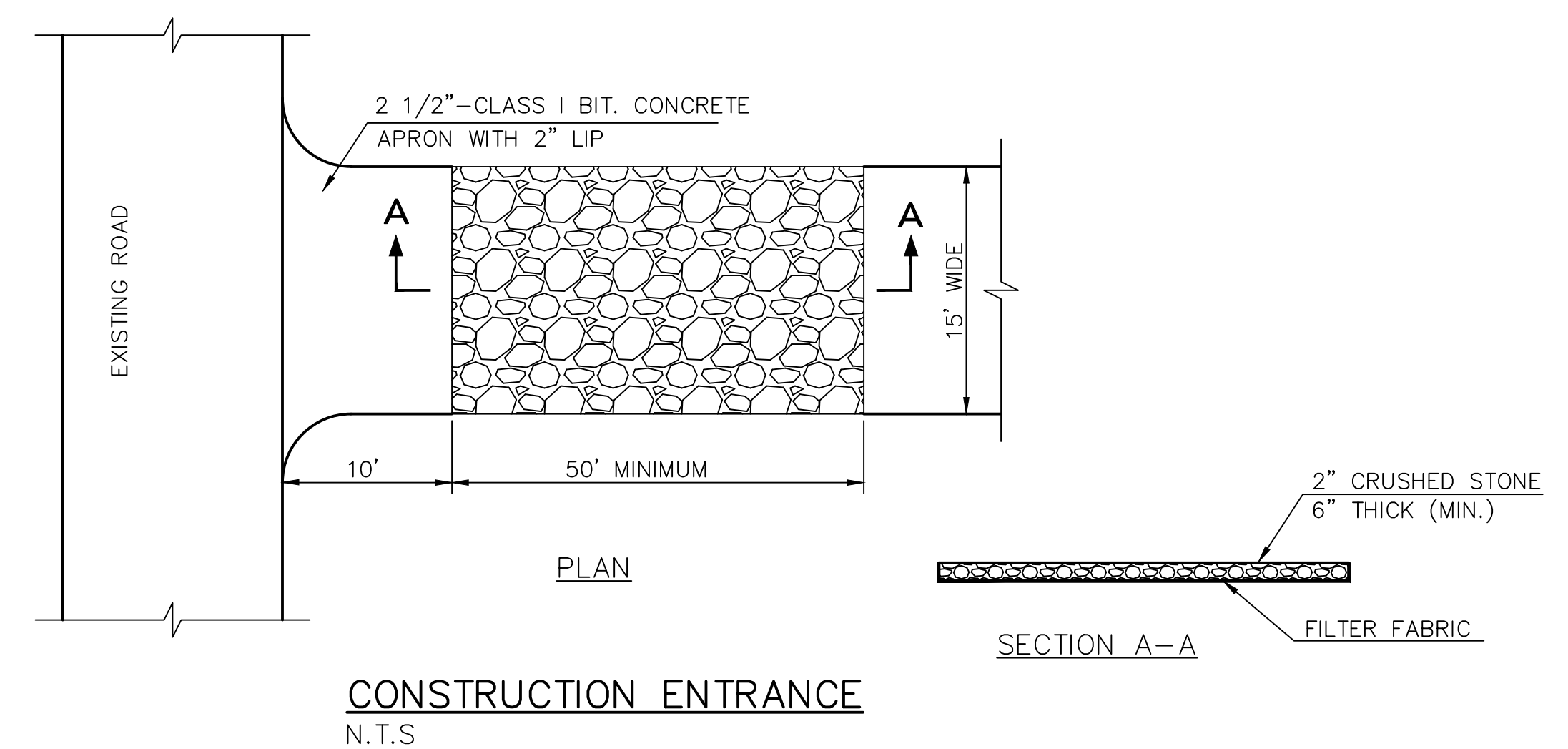
TYPICAL SEDIMENTATION TRAP DETAIL  
N.T.S.



CATCH BASIN INLET PROTECTION  
N.T.S.



CATCH BASIN INLET PROTECTION (AT TYPE C CATCH BASIN)  
N.T.S.



RESURVEY PREPARED FOR  
**ORCHARD HEIGHTS DEVELOPERS LLC**  
380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

EROSION  
&  
SEDIMENT  
CONTROL  
DETAILS

Sheet  
**1516**  
of

87306

**B&B**  
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Revision	
Comments	

**Weston Sampson**  
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EROSION CONTROL NOTES

PROJECT DESCRIPTION

A 6 LOT RESIDENTIAL SUBDIVISION IS PROPOSED ON A 2.62± ACRE PARCEL OF LAND LOCATED AT 380 TUNXIS ROAD IN WEST HARTFORD, CONNECTICUT. IN ADDITION TO THE SIX BUILDINGS, THE PROJECT SHALL INCLUDE CONSTRUCTION OF APPROXIMATELY 380' OF ROADWAY, DRIVEWAYS, CURBING, STORMWATER MANAGEMENT SYSTEM, UTILITIES, RETAINING WALLS, LANDSCAPING, AND EROSION & SEDIMENTATION CONTROL MEASURES.

WATER EROSION CONTROL MEASURES

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THIS EROSION AND SEDIMENT CONTROL PLAN AND THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002). THE CONTRACTOR FOR THE PROJECT SHALL MAINTAIN A COPY OF THIS EROSION AND SEDIMENT CONTROL PLAN AND THE CONNECTICUT GUIDELINES ON-SITE DURING CONSTRUCTION ACTIVITIES.

EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIST OF STRAW BALES, SILT SACK (INLET PROTECTION), WOVEN FABRIC (SILT FENCE), CONSTRUCTION ENTRANCE, TEMPORARY SEDIMENT TRAP, TEMPORARY SWALES (IF REQUIRED), AND EROSION CONTROL BLANKETS.

ALL MATERIAL SHALL BE NEW AND FREE FROM DEFECTS THAT WOULD COMPROMISE THE EFFECTIVENESS OF THE CONTROL MEASURES. AFTER COMPLETION, ALL MATERIAL SHALL BE DISPOSED OF PROPERLY. LOCATION OF EROSION AND SEDIMENT CONTROL MEASURES CAN BE SEEN ON THE EROSION AND SEDIMENT CONTROL PLANS. NOTE ALL WATER CONTROL MEASURES SHALL BE LOCATED DOWN GRADIENT FROM DISTURBED AREAS. IF TOPSOIL IS TO BE STORED IN AN AREA NOT SHOWN ON THE SITE PLAN, DUE TO UNFORESEEN EVENTS, PRIOR TO STORING, THE DOWN-GRADIENT PERIMETER OF THE STORAGE AREA SHALL BE PROPERLY PROTECTED TO THE SPECIFICATIONS DETAILED ON THIS PLAN.

WIND EROSION CONTROL MEASURES

DURING DRY WEATHER CONDITIONS, DISTURBED AREAS SHALL BE PROTECTED AGAINST WIND EROSION. DUSTY AREAS SHALL BE SPRAYED WITH WATER TO PREVENT WIND-BORNE PARTICLES.

SEEDING

ALL DISTURBED AREAS SHALL BE RESTORED – REFER TO LANDSCAPE PLANS FOR APPLICABLE SEED MIX AND SOIL AMENDMENTS.

DEWATERING

IN THE EVENT DEWATERING IS REQUIRED, THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A DEWATERING SETTling BASIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EVALUATING THE REQUIRED DEWATERING RATES AND SIZING THE BASIN AS OUTLINED IN THE CONNECTICUT SOIL AND EROSION CONTROL GUIDELINES. THE DEWATERING BASINS SHALL BE LOCATED ON SITE AWAY AREAS WHERE SURFACE WATER IS DIRECTED AWAY FROM THE BASIN. DISCHARGE FROM THE BASIN SHALL BE DIRECTED AWAY FROM WETLAND AREAS AND SHALL NOT CREATE EROSION.

MAINTENANCE OF EROSION AND SEDIMENT CONTROLS

MAINTENANCE OF EROSION AND CONTROL SHALL BE COMPLETED IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002). THE CONTRACTOR SHALL MAINTAIN A COPY OF THE GUIDELINES ON-SITE AND REFER TO THE APPROPRIATE MAINTENANCE PROCEDURES THAT SHALL BE UTILIZED DURING THE CONSTRUCTION. A SUMMARY OF THE MAINTENANCE REQUIREMENTS FOR THE PROJECT IS SUMMARIZED BELOW.

DURING CONSTRUCTION, ALL EROSION AND SEDIMENT STRUCTURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY TAKE PLACE WHERE IMMEDIATELY REQUIRED TO FURTHER CONSTRUCTION. IT IS DESIRABLE FROM AN EROSION PREVENTION CONCERN TO MINIMIZE DISTURBED AREAS. FINAL GRADING AND SEEDING SHALL TAKE PLACE AS SOON AS PRACTICAL.

A RAIN GAUGE SHALL BE PLACED AT THE PROJECT IN A WORKABLE LOCATION AND MONITORED DURING RAINFALL PERIODS UNTIL ALL DISTURBED AREAS ARE STABILIZED. IN THE EVENT THERE IS A RAINFALL GREATER THAN 1/2" IN A 12 HOUR PERIOD, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS REQUIRED WITHIN 24-HOURS OF THAT RAIN EVENT. IF NO RAIN GAUGE IS USED, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AFTER ALL RAINFALL EVENTS.

CONSTRUCTION ACCESS ROAD AND ENTRANCE:

CONSTRUCTION ACCESS ROAD SHALL BE INSPECTED AT THE COMPLETION OF EACH WORKING DAY. THE ACCESS ROAD AND ENTRANCE SHALL BE REPAIRED AND/OR TOP-DRESSED WITH ADDITIONAL AGGREGATE TO ELIMINATE RUTS AND PROVIDE A STABLE SURFACE FOR ENTERING AND EXITING THE PROJECT SITE. REMOVE ALL SEDIMENT SPILLED ON THE TRACKING PAD IMMEDIATELY TO AVOID TRACKING MATERIALS INTO EXISTING STREETS. ROADS ADJACENT TO THE CONSTRUCTION SHALL BE LEFT CLEAN AT THE END OF EACH WORKING DAY.

SILT FENCE AND STRAW BALES:

THE MEASURES SHALL BE INSPECTED A MINIMUM OF ONCE PER WEEK, OR BASED ON RAINFALL AT THE PROJECT SITE. REPAIRS AND MAINTENANCE SHALL BE COMPLETED AS NEEDED TO MAINTAIN THESE MEASURES IN PROPER WORKING ORDER. ADDITIONAL SILT FENCE AND STRAW BALES SHALL BE ADDED AS NEEDED DURING THE PROJECT TO REPLACE FAILED SYSTEMS OR LIMIT OTHER AREAS OF EROSION ON THE SITE.

TEMPORARY BERMS/SWALES (AS NEEDED):

THE SWALE SHALL BE INSPECTED A MINIMUM OF ONCE PER WEEK, OR BASED ON RAINFALL AT THE PROJECT SITE. REPAIRS AND MAINTENANCE SHALL BE COMPLETED AS NEEDED TO MAINTAIN THE FACILITIES IN PROPER WORKING ORDER. THE SWALE SHALL BE CLEANED AS REQUIRED, AND STONE CHECK DAMS SHALL BE PROVIDED IF EROSION OF SWALES IS OBSERVED.

TEMPORARY SEDIMENTATION TRAP:

THE SEDIMENTATION TRAP SHALL BE INSPECTED A MINIMUM OF ONCE PER WEEK, OR BASED ON RAINFALL AT THE PROJECT SITE. REPAIRS AND MAINTENANCE SHALL BE COMPLETED AS NEEDED TO MAINTAIN THE FACILITY IN PROPER WORKING ORDER. THE SEDIMENTATION TRAP SHALL BE CLEANED WITH THE SEDIMENT ACCUMULATED EXCEEDS ONE HALF OF THE STORAGE CAPACITY OR WHEN THE DEPTH OF THE AVAILABLE WATER IS REDUCED TO LESS THAN 18-INCHES. THE CONTRACTOR SHALL INSTALL A MARKER STAKE IN 2 LOCATIONS WITHIN THE SEDIMENTATION TRAP FOR THE PURPOSE OF TRACKING SEDIMENT LEVELS WITHIN THE TRAP. DURING REMOVAL OF THE SEDIMENT THE CONTRACTOR SHALL FOLLOW ALL PROCEDURES OUTLINED IN THE CONNECTICUT GUIDELINES FOR SOIL AND EROSION CONTROL (2002). EXCAVATED SEDIMENT SHALL BE STAGED AND SURROUNDED WITH STRAW BALES IN A MANNER SIMILAR TO STAGING FOR STOCKPILES.

A CHECK LIST (PROVIDED BY THE ENGINEER) SHALL BE FILLED OUT BY THE CONTRACTOR EVERY WEEK OR AFTER EACH RAINFALL EVENT OF 1/2" OR GREATER.

GENERAL NOTES

ALL DISTURBED AREAS SHALL BE KEPT TO A MINIMUM. FINAL GRADING AND RESTORATION SHALL BE ACCOMPLISHED AS SOON AS PRACTICAL.

EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED PRIOR TO SITE WORK. IF IT IS NOT POSSIBLE TO DO SO, THE ENGINEER SHALL BE NOTIFIED IN ORDER TO MAINTAIN THE INTEGRITY OF DESIGN.

ALL CONTROL STRUCTURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND REMOVED WHEN STABILIZATION HAS BEEN ATTAINED. IF THE PROPOSED CONTROL MEASURES ARE NOT SATISFACTORY, ADDITIONAL CONTROL MEASURES SHALL BE TAKEN.

ALL RUNOFF FROM THE DISTURBED AREA SHALL BE CONTROLLED AND FILTERED. NON-WOVEN SYNTHETIC FIBER FILTER FABRIC, STRAW BALES AND/OR SILTATION FENCE SHALL BE USED IN THE AREAS SHOWN ON THESE PLANS.

A CT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES WILL BE REQUIRED FOR THE PROPOSED PROJECT UNLESS IT MEETS THE CT DEEP CRITERIA AS A LOCALLY APPROVED PROJECT.

THE CONTRACTOR MUST OBTAIN COPIES OF THE ZONING, WETLANDS AND CTDEEP STORMWATER PERMITS PRIOR TO THE START OF WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF SEDIMENT AND EROSION CONTROL MEASURES. THIS RESPONSIBILITY INCLUDES THE ACQUISITION OF MATERIALS, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT STRUCTURES, THE COMMUNICATION AND DETAILED EXPLANATION TO ALL PEOPLE INVOLVED IN THE SITE WORK OF THE REQUIREMENTS AND OBJECTIVE OF THE EROSION AND SEDIMENT CONTROL MEASURES.

TWO (2) WEEKS PRIOR TO THE START OF WORK THE CONTRACTOR SHALL PROVIDE THE NAME AND PHONE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR IMPLEMENTATION OF THIS PLAN.

IN THE EVENT THE APPLICANT IS NOT OWNER OF THE PROPERTY, THE CURRENT OWNER SHALL HAVE ALL THE RESPONSIBILITIES LISTED IN THIS PARAGRAPH AND SHALL SUBMIT A WORKING PHONE NUMBER FOR CONTACT AT TIME OF APPLICATION FOR PERMITS. ANY CHANGE IN ENGINEER SHALL BE NOTED AT THIS TIME.

THE ENGINEER, WESTON & SAMPSON ENGINEERS, INC. (860-513-1473) #273 DIVIDEND ROAD, ROCKY HILL, CT, 06067 SHALL BE NOTIFIED OF ANY PROPOSED ALTERATION TO THE EROSION AND SEDIMENT CONTROL PLAN, PRIOR TO ALTERING, IN ORDER TO ENSURE THE FEASIBILITY OF THE ADDITION, SUBTRACTION, OR CHANGE IN THE PLAN.

SEQUENCE FOR CONSTRUCTION, APPLICATION OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, AND FINAL STABILIZATION OF THE PROJECT SITE

1. CLEARLY DEFINE AND FLAG THE PROPERTY LIMITS OF AND LIMITS OF CONSTRUCTION.
2. HOLD PRE-CONSTRUCTION MEETING (REMEMBER TO CALL BEFORE YOU DIG 1-800-922-4455)
3. HOLD A TREE-CUTTING MEETING.
4. INSTALL PERIMETER EROSION AND SEDIMENTATION CONTROLS IN ACCORDANCE WITH THE EROSION CONTROL PLAN.
5. CUT TREES WITHIN THE GRADING LIMITS AND REMOVE CUT WOOD. CHIP BRUSH AND REMOVE OFFSITE.
6. EXCAVATE ALL STUMPS LOCATED IN THE STRUCTURAL AREAS AND REMOVE TO A DISPOSAL SITE OR STOCKPILE AREA TO BE CHIPPED.
7. STRIP ALL TOPSOIL THAT IS WITHIN THE GRADING LIMITS. STOCKPILE ALL TOPSOIL AS SHOWN ON PLANS AND SECURE WITH EROSION AND SEDIMENT CONTROLS.
8. DEMOLISH EXISTING BUILDINGS AND REMOVE EXISTING BITUMINOUS DRIVEWAY AND CURBING.
9. EXCAVATE AND CONSTRUCT FOUNDATION OF BUILDINGS WITH APPROPRIATE STUBS/OPENINGS FOR UTILITIES. UPON COMPLETION BACKFILL FOUNDATION WALLS.
10. EXCAVATE AND CONSTRUCT RETAINING WALL(S). UPON COMPLETION, BACKFILL WALLS.
11. CUT OR FILL REMAINDER OF SITE TO ESTABLISH THE SUB-GRADE.
12. INSTALL DRAINAGE FACILITIES STARTING AT THE OUTFALL AND PROCEEDING UPGRADE.
13. INSTALL REMAINING UTILITIES.
14. CONNECT UTILITY SERVICE LATERALS TO BUILDINGS.
15. INSTALL GRANITE CURBING.
16. PLACE, GRADE AND COMPACT THE PROCESSED AGGREGATE IN THE PAVEMENT BASE.
17. APPLY STABILIZATION MEASURES (TOPSOIL, SEEDING, ETC.) TO REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL DETAILS.
18. INSPECT AND CLEAN DRAINAGE SYSTEMS AS NEEDED.
19. TOPSOIL AND GRADE WHERE REQUIRED AND WITHIN 2 FEET OF PROPOSED CURBING.
20. INSTALL FIRST COURSE OF BITUMINOUS CONCRETE PAVEMENT.
21. UPON SUBSTANTIAL COMPLETION OF THE BUILDING, COMPLETE THE BALANCE OF SITE WORK AND STABILIZATION OF ALL OTHER DISTURBED AREAS.
22. WHEN ALL OTHER WORK HAS BEEN COMPLETED, REPAIR AND SWEEP ALL PAVED AREAS FOR FINAL COURSE OF PAVING. INSPECT DRAINAGE SYSTEM AND CLEAN AS NEEDED.
23. INSTALL FINAL COURSE OF BITUMINOUS CONCRETE PAVEMENT.
24. INSTALL BIT. CURBING AS SHOWN ON PLANS.
25. INSTALL PLANTINGS, FINE GRADE, RAKE, SEED, AND MULCH.
26. AFTER ENTIRE SITE IS STABILIZED IN ACCORDANCE WITH THE APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS (E.G. SILT FENCES).

OPERATION AND MAINTENANCE PLAN  
380 TUNXIS ROAD, WEST HARTFORD

GENERAL

This section of the plan presents the operation and maintenance plan for the erosion and sediment control measures during construction and for the proposed stormwater management system. It also provides guidelines for when the stormwater system should be cleaned and associated recordkeeping.

EROSION AND SEDIMENT CONTROL MEASURES

The erosion control measures include the following items:

- Straw bales, and Silt Fence
- Permanent Erosion Control Matting
- Temporary Sediment Basin
- Temporary Swales/Berms
- Anti-Tracking Pad
- Vegetative Stabilization
- Temporary Soil Stockpiles
- Dust Control

During construction, the Contractor will be responsible for the operation and maintenance of the erosion and control measures. During this time all erosion and sediment structures shall be maintained in proper working order. Disturbed areas shall be kept to a minimum and shall only take place where immediately required to further construction. It is desirable from an erosion prevention concern to minimize the total disturbed area at any one time. Final grading and seeding shall take place as soon as practical.

A rain gauge shall be placed at the project in a workable location and monitored during rainfall periods until all disturbed areas are stabilized. In the event there is a rainfall greater than 1/2" in a 12-hour period, all erosion control measures shall be checked and repaired as required. If no rain gauge is used, all erosion control measures shall be checked after all rainfall events. A checklist will be filled out by the contractor each week.

All soil erosion and sediment control measures shall be installed as shown on the proposed site plans. It is the intent of this plan that soil erosion measures are the first to be installed and the last to be removed. Surface waters on and adjacent to the site and abutting properties are to be protected from degradation and sedimentation. If abutting properties or street right-of way are jeopardized by construction, it shall be the owner's or contractor's responsibility to protect those properties.

Soil erosion measures shall be inspected weekly and after significant storm events. Make all necessary repairs to facilities as soon as possible. Silt fences and straw bale barriers, temporary sediment trap, and construction swales which accumulate sediment and debris shall be cleaned and re-set.

STORMWATER SYSTEMS

The proposed site plan includes the following stormwater structures:

- Catch Basins with sumps, and Drainage Manholes
- Drainage Piping
- Subgrade Detention Chamber System
- Modified Riprap Splashpad & Level Spreader

The residential homeowner's association of the Tunxis Road development will be responsible for the operation and maintenance of the stormwater structures located outside of the road right -of way. Checklists will be utilized during the inspection and cleaning process and kept on file in the maintenance office.

1. Catch Basins with sumps, Drainage Manholes (includes Outlet Control Structure):
  - a. Catch basins and manholes shall be completely cleaned of accumulated debris and sediments at the completion of construction.
  - b. For the first year, catch basins, and manholes shall be inspected on a quarterly basis.
  - c. Any accumulated debris within the catch basins/ manholes shall be removed and any repairs as required.
  - d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
  - e. Accumulated debris within the catch basins/ manholes shall be removed and repairs made as required.
  - f. Accumulated sediments shall be removed at which time they are within 12 inches of the invert of the outlet pipe.
  - g. Any additional maintenance required per the manufacturer's specifications shall also be completed.
2. Drainage Piping
  - a. All storm drainage piping shall be completely flushed of debris and accumulated sediment at the completion of construction.
  - b. Unless system performance indicates degradation of piping, comprehensive video inspection of storm drainage piping shall occur once every ten years.
  - c. Any additional maintenance required per the manufacturer's specifications shall also be completed.
3. Subgrade Detention Chamber System

The Subgrade Detention Systems will have an Isolator Row which is wrapped in a specified filter fabric to trap sediment and will be inspected every three months and shall be cleaned once a year at a minimum. If during inspection, it is found that the sediment has accumulated within the Isolator Row, it shall be cleaned immediately with a jet-vac. The System's Isolator Row should be cleaned after the snow and ice removal seasons and before spring rainfall events.
5. Modified Riprap Splashpad & Level-Spreader

The Modified Riprap Splashpad & Level-Spreader will be inspected every three months and shall be cleaned once a year at a minimum. If during inspection, it is found that the sediment has accumulated within the splashpad and/or level-spreader, it shall be cleaned immediately. The splashpad and level-spreader should be cleaned after the snow and ice removal seasons and before spring rainfall events.

Disposal of Debris and Sediment:

All debris and sediment removed from the stormwater structures shall be disposed of legally. There shall be no dumping of silt or debris into or in proximity to any inland wetlands.

Maintenance Records:

The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times.

STORMWATER SYSTEM INSPECTION CHECKLIST

DATE/TIME: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

STRUCTURE	SATISFACTORY (YES OR NO)	COMMENTS	ACTION	DATE COMPLETED
CATCH BASINS/MANHOLES/OUTLET CONTROL STRUCTURE				
OCS-1				
STORM MH4				
CB20				
CB21				
CB22				
SUBGRADE DETENTION SYSTEM				
ISOLATOR ROW				
24" HDPE MANIFOLD PIPING				
MODIFIED RIPRAP SPLASHPAD				
OUTFALL (NORTH)				
MODIFIED RIPRAP LEVEL-SPREADER				
OUTFALL (NORTH)				

RESURVEY  
PREPARED FOR

ORCHARD HEIGHTS DEVELOPERS LLC

380 TUNXIS ROAD  
WEST HARTFORD, CONNECTICUT

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